CAPTURING THE POLICY THAT AIR FORCE RATERS USE WHEN WRITING PERFORMANCE APPRAISALS ON JUNIOR OFFICERS

THESIS

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Finally, but most importantly, I would like to thank God for the blessings he has given me. Only through His grace can I accomplish anything.

Owen D. Stephens

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Abstract

This study examined the relationship between four dimensions of performance—leadership, task performance, interpersonal facilitation, and job dedication—and overall performance by junior officers in the Air Force. It was hypothesized that the four dimensions would have different relative importance to overall performance, ratee gender would have no effect on rating policy, and raters with greater experience would show greater rating consistency. Finally, it was hypothesized that the Conscientiousness factor of the International Personality Inventory Protocol and Positive and Negative Affectivity may be correlated with the relative importance of the four dimensions of performance and a rater leniency measure and that significant prediction models could be developed.

For the entire sample and a sub sample of Majors-and-above, leadership was the most important dimension. The other dimensions—task performance, interpersonal facilitation, and job dedication—were equally important, yet less important than leadership. For Captains and below, all dimensions were equally important. There was no significant gender effect on ratings, but there was evidence that experience is positively related to consistency of ratings for Majors and above. Neither Conscientiousness nor Positive and Negative Affectivity could be used to develop a significant prediction model for the importance of behavior dimensions or rater leniency.

CAPTURING THE POLICY THAT AIR FORCE RATERS USE WHEN WRITING PERFORMANCE APPRAISALS ON JUNIOR OFFICERS

I. Introduction

General Issue

The Air Force has changed dramatically in recent years and the expectations that raters have for junior officers may have changed with it. As roles the Air Force must play adapt to the changing world environment, the roles of junior officers must also adapt. What are the current roles of the junior officer as measured by the expectations of the officers who rate them? This is one of the primary questions this research hopes to answer by measuring the rating bias of officers who are in a position to rate junior officers.

Raters have two levels of bias that they must work through to evaluate a junior officer. The first bias deals with the individual behaviors of the junior officer that the rater observes. What types of behaviors are most important for the success of junior officers? This question has been answered for a sample of possible behaviors and is discussed later in this thesis. Each of these behaviors has an importance weighting that

varies slightly from rater to rater. For example, one rater may weigh "gets along with others" significantly less than "cooperates with others on the team effectively."

The second level of bias deals with dimensions of behaviors. This research effort divided the behavior dimensions into four broad categories: leadership, task performance, interpersonal facilitation, and job dedication. The rater may display a bias toward or against a particular behavior dimension. This bias will be displayed in the weighting the rater uses for each dimension to decide the junior officer's overall performance. For example, a rater may feel that a junior officer has displayed very good interpersonal facilitation behaviors, but the interpersonal facilitation dimension may not be important to that rater and so the rater does not weight this facet of performance heavily when rating the overall effectiveness of the junior officer.

Junior officers initially learn how they will be rated while attending their commissioning source program. After they enter the Air Force, peers, supervisors, and Professional Military Education (PME) reinforce their knowledge. Therefore, there are four primary sources where junior officers learn about officer effectiveness and appropriate behaviors: commissioning programs, PME, supervisors, and peers.

The three commissioning sources—U.S. Air Force Academy (USAFA), Reserve Officer Training Corp (ROTC), and Officer Training School (OTS)—provide officers basic knowledge of the behaviors that will make them successful. Individuals in these commissioning sources receive instruction in communication skills, leadership, and managerial practices expected to be important in their Air Force roles (Air Command and Staff College, 1988: 10).

After entering the Air Force, junior officers receive further instruction at PME schools. Squadron Officer School (SOS), the primary junior officer PME, reinforces the same knowledge that the officers learned at their commissioning sources. Some bases also have an informal, local PME called Lieutenants Professional Development Program (LPDP). An examination of this curriculum shows this course is a scaled-down version of the curriculum at SOS (Company Grade Officer Professional Development Program Study Guide, 1999).

Junior officers also receive information about important behaviors from their supervisors—referred to in the rest of this document as raters. The Officer Evaluation System is the avenue for formal education about expectations for junior officers. This system appraises individual performance and provides an avenue for feedback concerning the individual's on-going performance. Some raters may also form a mentoring relationship with their junior officers and provide them with informal insight into the behaviors that are expected of them.

Finally, peer networks provide an informal source of knowledge about successful and unsuccessful behaviors. Junior officers may gather at the Officer's Club after work or meet at Company Grade Officer's Council meetings. Here, the junior officers share their own personal experiences about which behaviors have afforded them success. They may also share their experience about which behaviors have damaged their career progress.

Although there is plenteous research concerning performance appraisals and behaviors, little empirical research has been directed at discovering which types of

behaviors and behavior dimensions are important to Air Force raters. Recently, however, the three commissioning sources began to re-analyze their key processes, programs, and customer requirements (Hurry, 1995: 2). The commissioning sources needed to ensure that graduates have the specific knowledge, skills and behaviors needed to be successful in their Air Force careers, but there was little empirical evidence to use in their analysis (Hurry, 1995: 2). In 1994, a study was performed at the Air Force Institute of Technology (AFIT) to capture the policy that Air Force raters use when appraising their subordinates (Hurry, 1995). This study developed a good model for identifying which behaviors are important to Air Force raters, but a methodological error may have caused the results, and therefore the conclusions drawn from them, to be invalid. The researcher failed to randomize the behavior order within the fictitious profiles. The resulting order of behavior dimension importance mirrored the order of the behavior dimensions in the profiles. This will be discussed in greater detail in Chapter II.

This thesis will readdress these issues by proposing and testing a comprehensive set of behaviors and identifying the most important behaviors for successful performance. This thesis will also overcome any potential problem caused by the order effect present in the previous research and attempt to validate or invalidate the previous research by identifying the order of importance of the four behavior dimensions to Air Force raters.

This thesis will add to the previous research by measuring raters' personality traits and identifying how these traits may influence performance appraisal policy. For example, a high level of the personality trait of "Conscientiousness," may be present in raters who display more consistency in their assessment of junior officers. The traits this

research will explore are the six facets of the personality factor Conscientiousness—Self-Efficacy, Orderliness, Dutifulness, Achievement-Striving, Self-Discipline, and Cautiousness (Goldberg, 1999). It will also explore mood traits with a brief measure of positive and negative affectivity (PANAS) (Watson, Clark, and Tellegen, 1988). The results of this research can help guide the commissioning sources in their efforts to build curriculum that teaches students the appropriate knowledge, skills, and behaviors needed in a successful Air Force career.

Research Questions

The primary purpose of this thesis is to determine the knowledge, skills, and behaviors that raters feel contribute the most to the overall performance of junior officers. Since an officer's overall performance is a product of his or her performance in a variety of tasks (Slovic and Lichtenstein, 1977), this study will use the policy capturing method to determine how the raters use the dimensions to arrive at an overall rating. This method measures the perceived importance of each chosen behavior category and to what degree that category influences the overall rating given to the junior officers.

The second objective of this study is to explore the possibility that other demographic factors of raters may influence their appraisal policy. Therefore the study will examine the influence of experience, commissioning source, and gender on raters' ratings. Experience will be examined using several measures: rank, total time in service, and past experience at rating.

The third objective of this study is to determine if rater personality traits affect the importance they place on behavior dimensions, the ratings they give to subordinates, or the amount of rating consistency or leniency that they display. Mood, captured as a long-term trait, is one important trait that may affect raters' policy. Therefore, this study will capitalize on previous research that provides valid measures of two dimensions of mood, positive and negative affect (Watson, Clark, and Tellegen, 1988). This study will also measure six facets of personality, as previously mentioned, to determine if they influence raters' ratings (Goldberg, 1999).

The fourth objective of this study is to determine if rater career fields have any bearing on their appraisal policies. This research will divide military raters into four major categories: rated officers, support officers/managers, analysts/engineers, and others. These categories were tested in previous research (Hurry, 1995) and no significant differences were found between job categories. However, order effects may have confounded the research, so this study will attempt to validate the previous findings.

The final objective of this study is to determine if the gender of the subordinate affects raters' rating policies. This study will use a visual cue—the name of the ratee—to identify the gender of the rated junior officer and examine if this cue has any influence on the ratings.

Statement of Problem

The purpose of this research is to identify the weight that raters apply to behavior dimensions when they complete the ratings of hypothetical profiles of junior officers.

The research will also identify other factors that may bear on raters' decisions when they complete performance appraisals.

Scope of Research

This study is limited to the behaviors that are important for junior officers. Junior officer is defined here as a Company Grade Officer (CGO)—2nd Lieutenant through Captain. The range this research will consider for raters of junior officers is 2nd Lieutenant through Lieutenant Colonel. Generally, only Captains and above have experience rating junior officers, but it is important to be able to contrast perceptions of junior officers to those of higher rank. Finally, this study will be limited to four Air Force bases and a sample of convenience of Air Force Institute of Technology (AFIT) and Defense Acquisition University (DAU) students due to the limited resources and time of the researcher.

II. Literature Review

Introduction

The model in Figure 1 provides a pictorial representation of this research. This thesis will develop the model, discussing each of the constructs throughout this section by examining previous research that provides background information.

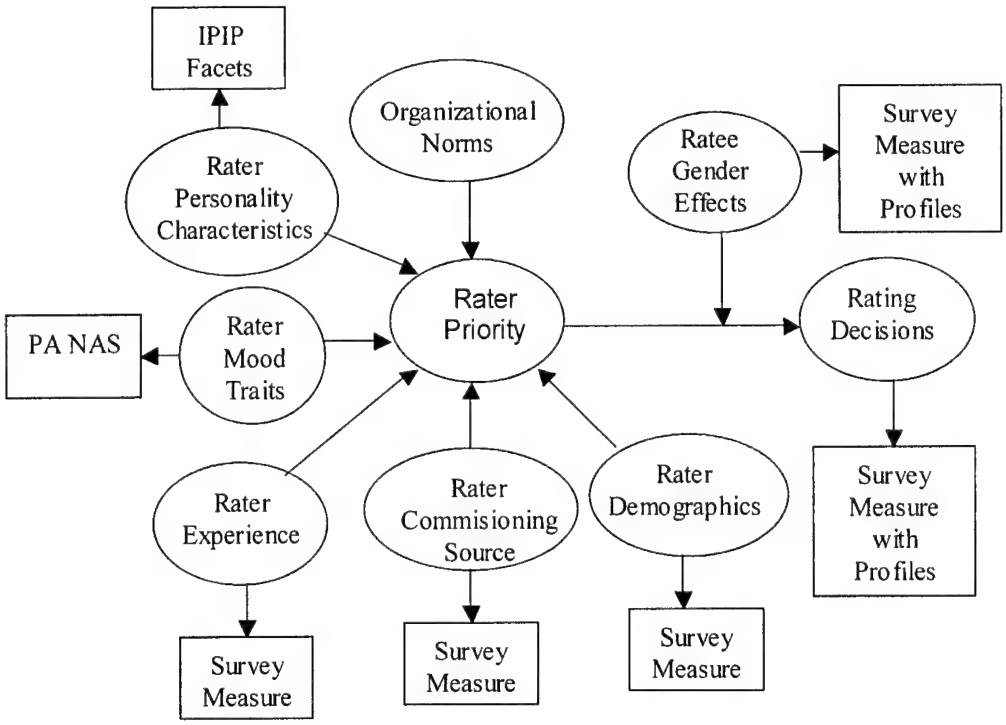


Figure 1. The Model of Air Force Rater Priorities

The Rating Approach Used

The process approach to assessment was used for this research effort out of three possible alternatives presented by Campbell, Dunnette, Lawler, and Weick— the product

approach, the person approach, and the process approach (Campbell et al., 1970: 175). The product approach was infeasible because of the methodology chosen. It measures physical output and that is not possible using the fictitious profile survey method, especially since product is job specific and this method dealt in the realm of generalities.

The person approach revolves around the theory that individuals have traits or characteristics. Some of these traits would make individuals effective performers while others make individuals ineffective performers. First, traits would be difficult to present using the method chosen for this research. Also, traits may not necessarily result in effective performance because the traits are not backed up by behaviors. In order to truly result in effective performance, the traits would have to be followed by appropriate actions.

The process approach examines performance using the behaviors exhibited by the individual being rated. This approach lends itself to the fictitious profile survey method because behaviors can be seen and recorded. In fact, Officer Performance Reports rely heavily on reporting individual behaviors. Kirkpatrick and Locke (1991: 501) wrote that behaviors and product can be reliably observed, but traits cannot be reliably observed. Also, there is an ample amount of research dedicated to behaviors, providing this effort with an adequate supply of positive behavior for each of the four performance dimensions. Therefore, of the three approaches, the process approach was the best choice given the method used to gather rater policy.

Rater Priority and Policy Capturing

The organizational norms concerning rater priority are the main area of interest. This cannot be measured directly, so it must be measured through the constructs of "Rater Priority" and "Rating Decisions". The only construct that can be measured directly is "Rating Decisions," and it will be measured using the profile scenario method of policy capturing.

The term "policy" is defined as "the factors used in making a judgment and the relative weighting thereof" (Ullman and Doherty, 1984: 179). Within this same context, "policy capturing" refers to "studies that analyze judgments made on the basis of multidimensional stimuli by means of a linear model" (Brehmer and Brehmer, 1988: 78). A growing body of research is using policy capturing as a method of addressing rater decision-making in performance appraisals (Hobson and Gibson, 1983). The use of policy capturing is compatible with the efforts of this study. This method measures the perceived importance of each chosen behavior category and to what degree that category influences the overall rating given to the junior officers. Policy capturing will provide the means to model the relationship between the chosen behavior dimensions and the supervisor's overall performance rating policies.

This study will use self-reporting to capture the policy that raters use when making an assessment. Unfortunately, several problems exist with asking individuals to report on the factors that affect their own decisions and judgments. Research has shown that people typically do not have good insight into the various influences involved in their decision-making processes, even though respondents typically believe that they do

(Brehmer and Brehmer, 1988; Nisbett and Ross, 1980; Nisbett and Wilson, 1977). This same problem has also been evidenced concerning individuals' rating policies (Hobson et al., 1981; Taylor and Wilsted, 1974; Zedeck and Kafry, 1977). In order to overcome this problem, a method of analysis that measures the importance of the dimensions of performance without capturing the poor insight is needed (Hobson and Gibson, 1983). Hobson and Gibson (1983) suggest that field studies would be the most effective method to achieve this, but self-reporting on hypothetical profiles is necessary to generate the advantage of a large number of profiles.

Gender Effects

A growing body of literature in the field of gender effects on performance appraisals has produced mixed results. Empirical evidence of performance appraisals does not wholly support the popular news media notion that women are treated unfairly. While studying women in the accounting career field, Fogarty, Parker, and Robinson (1998) provided empirical evidence that females do not receive lower ratings than males. Other researchers (Dobbins and Trahan, 1986; Shore and Thornton, 1982) have examined this area and found that women receive higher ratings than men. Lewis (1997) studied civilians in the federal service and also found that, in general, women receive higher ratings than men in all job categories and every grade level.

Demographics

Rater demographics are the variables such as rater sex and Air Force job category. Hurry (1995) found that these variables explained none of the variance in behavior

ratings or overall performance ratings. The effect of these variables may have been confounded by the order effects present in her study and should be examined again.

There were three job categories chosen for this research—rated officers, support officers, and analysts/engineers. There was also an "other" category for officers that do not neatly fit into one of these three categories. The rated officer category includes pilots and navigators. These officers generally are not given supervisory positions until they have been promoted beyond the junior officer ranks. Support officers form the second category being examined and include logisticians, administrative/executive officers, personnel officers, acquisition officers, civil engineers, etc. It would not be unusual for support officers to be placed in supervisory/leadership positions early in their careers. Finally, analysts/engineers make up the last job category being examined. The category includes operations researchers, design engineers, aeronautical engineers, and other technical jobs as would be found in the Air Force Research Labs. Analysts/engineers usually have very little opportunity to supervise or lead subordinate Air Force personnel. These categories are not the only categories in the Air Force, but do represent the majority of officers. There may be a large enough response in the "other" category, however, to justify inclusion of an additional category in the analysis.

Rater Commissioning Source and Experience

Borman et al. (1987) theorized and Van Scotter and Shane (1995) found that job experience could affect rating judgments of supervisors. Van Scotter and Shane (1995) reported, "the source of entry-level training [commissioning source] also made a

difference, but it is confounded here by a relationship with the experience variable" (Van Scotter and Shane, 1995: 224). Because previous research suggests that rater experience and commissioning source may influence rating judgment, these two variables will be examined.

In the Air Force, grade level and experience are highly correlated. One could expect that with experience comes consistency, and therefore the more experienced officers would tend to rate behaviors more consistently. R^2 provides an adequate measure of rating consistency in policy capturing studies because more consistent respondent ratings result in a better model fit and therefore a higher R^2 (Hobson and Gibson, 1983). R^2, a sample statistic, implies that it can be used as an indicator of the usefulness of the entire model for predicting (McClave, Benson, and Sincich, 1998). Therefore, a high R^2 indicates that the regression model is an appropriate tool to use for capturing raters' priorities.

Mood Traits and Personality

Finally, this study will examine the effects of rater personality on a rater's overall rating policy. Research has suggested that individual personality difference variables can make a substantive contribution to the selection equation when trying to predict job performance (Day and Silverman, 1989; Hough, Eaton, Dunnette, Kamp, and McCloy, 1990). A meta-analysis by Tett, Jackson, and Rothstein (1991) provided empirical evidence that personality measures can be used to predict job performance.

Most of the meaningful research in this area has centered on the five-factor model of personality: neuroticism (negative emotionality in The Big Five), extraversion, openness, agreeableness, and conscientiousness (Piedmont and Weinstein, 1994). There are two models that have found the most favor in this research. Both The Big Five model, developed by Barrick and Mount (1991), and the NEO PI-R developed by Costa and McCrae (1992), have been used to successfully predict job performance. Costa and McCrae have also established that the five dimensions are sufficient to describe the information contained in other personality systems (1989). A third model which closely mirrors both the Big Five and the NEO PI-R, is the International Personality Inventory Protocol (IPIP) (Goldberg, 1999). This is the model that will be used in this research.

Some researchers feel that the five-factor model is inappropriate for use as a tool to predict other variables. Block (1995) wrote an article to specifically challenge the usefulness of the five-factor models, noting that five-factor models were "not specific enough" to represent the rich realm of personality. Hough (1992) felt that five-factor models, in particular the Big 5 (Barrick and Mount, 1991), were also not specific enough. In 1995, Schneider and Hough noted that five-factor models were too expansive to link to specific behaviors.

Rating a subordinate is the job of raters and therefore there is some level of job performance to be measured as they make their rating decisions. Because personality assessments have proven useful in predicting job performance, they could also be used to predict rater's assessments of subordinates. A recent study utilized the NEO PI-R to predict supervisor ratings of job performance based on a personality assessment of the

subordinate (Piedmont and Weinstein, 1994). They examined the correlations of the inventory with three dimensions of job performance and the overall rating. They found several statistically significant correlations between the personality of the subordinate and his or her performance ratings.

The next step in this line of research would be to see if the personality of the raters could be used to predict their ratings or their rater priorities. Bernardin, Cooke, and Villanova (2000) recently used the 60-item NEO FFI (Costa and McCrae, 1992) to predict rater leniency. They examined peer ratings and professor ratings of students and found both to be significant. They found that the personality factors Agreeableness and Conscientiousness were significantly correlated to overall ratings at the .05 level (two tailed). The correlations were .33 and -.37 respectively. This means that, relative to each other, an Agreeable rater would tend to inflate ratings while a Conscientious rater would tend to deflate ratings. The 60-item NEO FFI cannot distinguish between the individual facets of each personality factor, however, so the results cannot be generalized any further than the overall personality factor.

Mood is one important trait that may affect raters' policy, so this study will capitalize on previous research that provides valid measures of two dimensions of mood, positive and negative affect (Watson, Clark, and Tellegen, 1988). "Positive Affect reflects the extent to which a person feels enthusiastic, active, and alert. High PA is a state of high energy, full concentration, and pleasurable engagement" (Watson, Clark, and Tellegen, 1988: 1063). "Negative Affect is a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states,

including anger, contempt, disgust, guilt, fear, and nervousness" (Watson, Clark, and Tellegen, 1988: 1063).

This researcher did not find any relevant research that had used mood in relationship to policy capturing or performance appraisals from the rater point of view. However, based on the definitions of positive and negative affectivity, these measures might have a relationship with rater policy, in particular rater leniency and consistency. For example, a high PA score may be related with a tendency to inflate ratings because the respondent focuses on the more positive aspects of a profile while a high NA score may show the opposite tendency.

The mood measures will be measured within the context of the previous year of the respondent. This is an effort to capture the long-term mood trait of the respondent versus a short-term mood. By expanding the time frame of the measures, the responses should be a more stable representation of the mood traits of the respondents (Watson, Clark, and Tellegen, 1988; Diener & Larsen, 1984; and Epstein, 1979)

The Four Dimensional Overall Performance Model and Associated Behaviors

Previous research provides validation to the use of a four-dimensional model of overall performance: leadership, task performance, interpersonal facilitation, and job dedication. Leadership is defined as "the art of influencing and directing people to accomplish the mission" (Air Command and Staff College, 1988: 1). Task performance is the proficiency with which an individual performs activities that are formally recognized as the technical or specialized activities that define his or her job (Borman and

Motowidlo, 1993: 73). Interpersonal facilitation is the extent to which a worker supports other members of the organization through expressions of concern, consideration, cooperative and helpful acts (Van Scotter, 1994). Job dedication is the extent to which a worker goes above and beyond the requirements of his or her official job description and exceeds the minimum expectations of his or her rater. Interpersonal facilitation and job dedication are both considered contextual behaviors. The individual dimensions are discussed in greater detail below.

Contextual behaviors can be divided into two categories: job dedication (behaviors relating to the organization) and interpersonal facilitation (behaviors relating to individuals) (Motowidlo and Van Scotter, 1994). Katz and Kahn (1978) innovated the field of behavior by differentiating task performance from "innovative and spontaneous behavior." The spontaneous behavior includes "cooperative gestures, actions protecting the organization, and behavior that enhances the external image of the organizations" (Katz and Kahn, 1978: 75-76). Research by Katz and Kahn (1978), Smith et al. (1983), Brief and Motowidlo (1986), Motowidlo et al. (1986), Day and Silverman (1989), Campbell and Zook (1991), Borman and Motowidlo (1993), and Van Scotter (1994) provide empirical evidence that combining interpersonal facilitation behaviors and job dedication behaviors into a single measure of contextual performance may obscure any assessment of individual effectiveness. Van Scotter determined that task performance, interpersonal facilitation, and job dedication are all separate dimensions of individual effectiveness and that all individually contribute to the organizational effectiveness of Air Force maintenance technicians (1994). Research by Hurry indicated that a fourth factor,

leadership, could be added as a separate dimension of individual effectiveness (1995). Hurry found that the intercorrelation between leadership and the other three dimensions of individual effectiveness was small, indicating that leadership is an orthogonal dimension of overall performance. In other words, leadership can be treated as a separate, distinct dimension of overall performance. Because Hurry (1995) depended on the four-dimensional model, and this research is attempting to validate her efforts, it is necessary for this research to also depend on the four-dimensional model of overall performance.

Not all research agrees with the four-factor model of performance, though. Podsakoff, Mackenzie, Paine, and Bachrach (2000) noted that job dedication and interpersonal facilitation might not contribute to overall performance independently enough to be measured separately because it "is difficult to distinguish empirically from in-role or task performance". James Conway (1999) tested whether job dedication and interpersonal facilitation contributed independently to overall performance, hypothesizing that they would be redundant. He found that there is some evidence to suggest that the two dimensions do contribute independently to overall performance and that supervisors pay more attention to task performance.

There is a plethora of research concerning behaviors that are indicative of the four dimensions of overall performance examined in this study (Bausum, 1986; Borman and Motowidlo, 1993; Air Command and Staff College, 1988; Conger et al., 1989; Van Scotter and Shane, 1995; Borman and Brush, 1993; Department of the Air Force, 1988; and Van Scotter, 1994). The behaviors were revalidated when examined by Hurry

(1995). The behaviors chosen by Hurry (1995) for leadership, task performance, interpersonal facilitation, and job dedication and the behavior means as found by Hurry are listed in Appendix A through Appendix D respectively. Following is a more detailed discussion concerning each of the dimensions.

Leadership.

Hogan et al. proposed that leadership "involves persuading other people to set aside for a period of time their individual concerns and to pursue a common goal" (Hogan et al., 1994: 493). The Air Force refines the definition of leadership to "the art of influencing and directing people to accomplish the mission" (Air Command and Staff College, 1988: 1). Bausum (1986), Borman and Motowidlo (1993), Air Command and Staff College (1988), Conger et al. (1989), Borman and Brush (1993) and Van Scotter and Shane (1995) all developed lists of effective leader behaviors. Subsequent research pooled these lists and developed a common list of the behaviors most relevant to junior officers in the Air Force (Hurry, 1995).

Task Performance.

Borman and Motowidlo define task performance as the proficiency with which an individual performs activities that are formally recognized as the technical or specialized activities that define his or her job (Borman and Motowidlo, 1993: 73). Task performance behaviors contribute directly and indirectly to the organization's technical core processes and to the production of goods or services through proficient and effective behaviors (Van Scotter, 1994: 23).

Campbell et al. assert that proficiency is an important component of task performance behaviors and states that core technical proficiency "refers to how well the individual can execute the core technical task the job requires, given a willingness to do so" (Campbell et al., 1990: 322). Lists of task performance behaviors have been developed by the Department of the Air Force (1988), Van Scotter (1994) and Borman and Brush (1993). These behaviors were compiled and distilled into a list by Hurry (1995). These behaviors do not indicate specific job skills, but state how well the individual performs his or her core job tasks in general.

Interpersonal Facilitation.

Van Scotter defined interpersonal facilitation as the extent to which a worker supports other members of the organization through expressions of concern, consideration, cooperative and helpful acts. The individual also contributes to co-workers' effective task performance, encourages others to perform in organizationally relevant ways, and helps to maintain a social and psychological climate that facilitates accomplishment of the organization's goals (Van Scotter, 1994: 21-24). Interpersonal facilitation is behaviors that increase the organizations overall performance, but individuals receive little, if any, direct compensation for the performance of these behaviors. Positive interpersonal facilitation, though, is one facet of an overall effective performer.

Organ introduced the characteristics of organizational citizenship behaviors that are indicative of interpersonal facilitation including altruism, courtesy, and sportsmanship

(Organ, 1990: 96). For the purposes of this study, altruism is defined as "voluntary actions that help another person with a work problem," while courtesy "subsumes all of the foresightful gestures that help someone else prevent a problem" (Organ, 1990: 96). He defined sportsmanship as "a citizen-like posture of tolerating the inevitable inconveniences and impositions of work without whining and grievances" (Organ, 1990: 96).

Borman and Motowidlo (1993), Van Scotter (1994), Van Scotter and Shane (1995), and Borman and Brush (1993) each described a set of behaviors associated with effective interpersonal facilitation. These behaviors were compiled and distilled by Hurry (1995).

Job Dedication.

Job dedication "transcends job involvement and motivations to perform the specific tasks that comprise the job and connotes a sense of loyalty to the organization as a whole and a desire to fulfill more general role requirements that come with organizational membership" (Borman and Motowidlo, 1993: 78). Hurry acknowledged that job dedication "encompasses volitional, motivated behaviors that are driven by will, motivational orientations, and beliefs about the value of work" (Hurry, 1995: 20). Self-motivation, working hard, attending to important details, and persisting to finish a difficult task contribute to individual and organizational effectiveness (Van Scotter, 1994: 2). Most discussions of job dedication revolve around describing behavior that is indicative of the dimension. Therefore, this researcher has defined job dedication as the

extent to which a worker goes above and beyond the requirements of his or her official job description and exceeds the minimum expectations of his or her rater.

Borman and Motowidlo (1993), Van Scotter (1994), Van Scotter and Shane (1995), and Borman and Brush (1993) each developed behaviors that are indicative of job dedication. These behaviors were assembled and refined by Hurry (1995).

The Foundation of This Research

This research is primarily built upon the foundation of research by Hurry (1995) and hopes to improve that research by eliminating the order effect present in her survey instrument and examining personality traits as possible predictors of rating policy. The four-factor model proposed by Hurry (1995) and utilized by this thesis is shown in Figure 2 (Hurry, 1995).

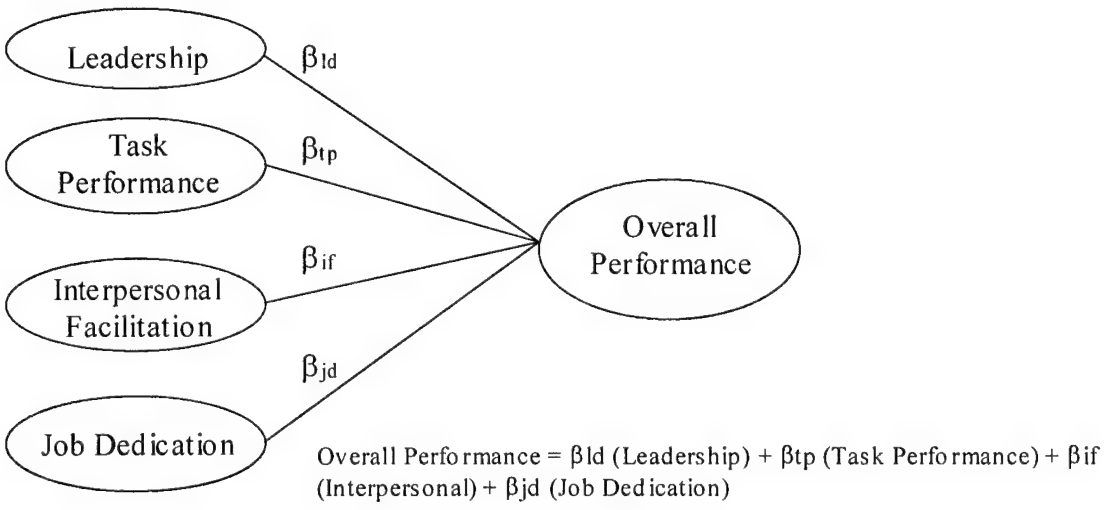


Figure 2. Four-Factor Model of Junior Officer Performance (Hurry, 1995)

Hurry developed a survey with 50 hypothetical officer profiles. Each profile listed one example from each of the four behaviors and asked respondents to rate the behavior and provide an overall performance rating for the hypothetical officer.

> The [β_{ld}, β_{tp}, β_{if}, and β_{jd}] in this equation represent the relative weights (or amount of importance) the supervisors place on a given performance category. Therefore, this model says that an individual's overall effectiveness is the sum of his or her performance in leadership, task performance, job dedication, and interpersonal facilitation multiplied by the weight their supervisor places on the particular category. The average weights for each category over a large sample of supervisors represent the organization's policy. However, if supervisor's views of performance vary greatly or the performance factors overlap too much, one or more of the factors may not be significantly different from zero. Thus, the model provides a framework for determining which classes of behavior Air Force supervisors judge as most important for effective junior officer performance. (Hurry, 1995: 23)

She found that the order of importance that raters placed on the four individual behaviors was leadership, task performance, interpersonal facilitation, and job dedication respectively. However, instrument effects may have confounded her method. The survey used for Hurry's (1995) study listed the four behaviors in the same order for every hypothetical officer profile. This order was identical to the order of importance that was found in the results; therefore the results cannot be relied upon until validated.

Objectives and Hypothesis

This study's objectives are: 1) to determine the knowledge, skills, and behaviors that supervisors feel contribute the most to the performance of junior officers, 2) to

explore the possibility that rater characteristics (i.e. experience, training, demographic variables, etc.) may influence appraisal policy, 3) to determine if officer career field has any effect on appraisal decisions, 4) to test the relationship between rater personality traits and ratings given to ratees, and 5) to determine if ratee gender has any influence over the individual dimension or overall performance ratings. To accomplish these objectives, the following research questions and accompanying hypotheses will be investigated. It is proper to recognize that questions 1-5 and hypotheses 1-9 are significantly the same as the questions and hypotheses posed by Hurry (1995).

Question 1. Which leadership, task performance, interpersonal facilitation, and job dedication behaviors are most important in accomplishing Air Force jobs?

Question 2. Do leadership, task performance, interpersonal facilitation, and job dedication behaviors each contribute significantly and independently to supervisor's overall performance rating decisions?

> Hypothesis 1: Supervisors will use all four performance dimensions while making decisions about overall junior officer performance. The mean standardized beta weights for leadership, task performance, interpersonal facilitation, and job dedication will all be significantly different from zero when the dimension ratings are regressed against the overall performance ratings.

Question 3. Does the importance of the four dimensions of performance—leadership, task performance, interpersonal facilitation, and job dedication—change depending on officer occupation?

> Hypothesis 2: The importance of the four performance dimensions will significantly differ by officer occupation.

Question 4. Does the importance of the four dimensions or the mean score of the four dimensions or overall score vary with the supervisor's grade, race, sex, or commissioning source?

> Hypothesis 3: The beta weights and the mean scores for the four dimensions of performance and the mean scores for the overall performance will vary with officer experience/grade.
>
> Hypothesis 4: The beta weights for the four dimensions of performance will vary with the supervisor's sex.
>
> Hypothesis 5: The beta weights and mean scores for the four dimensions of performance and the mean scores for the overall performance will vary with the supervisor's commissioning source.

Question 5. Does the consistency of the captured rating policy vary with the supervisor's job category, grade, race, sex, experience, or commissioning source?

> Hypothesis 6: The consistency of the rating policy will differ between job categories.
>
> Hypothesis 7: The consistency of the rating policy will vary with the experience/grade of the raters.
>
> Hypothesis 8: The consistency of the rating policy will differ between genders of the raters.
>
> Hypothesis 9: The consistency of the rating policy will differ between commissioning sources of the raters.

Question 6. Can the personality characteristics of the rater be used to accurately predict some variance in the ratings given for the four performance dimensions or the overall performance ratings?

> Hypothesis 10: Some or all of the personality characteristics of the rater will be statistically significant

predictors of dimension ratings and overall performance ratings.

Questions 7. Does the gender of the ratee affect the ratings received in any of the four performance dimensions or the overall performance rating?

Hypothesis 11: The gender of the ratee will not affect the ratings received in the four performance dimensions or the overall performance ratings.

III. Method

The Survey Instrument

The first step in this policy capturing study was to gather behaviors that were indicative of junior officer behaviors. These behaviors have been previously classified into the four dimensions of overall performance and validated by a number of researchers (Hurry, 1995; Bausum, 1986; Borman and Motowidlo, 1983; Air Command and Staff College, 1988; Conger et al., 1989, Van Scotter and Shane, 1995; Borman and Brush, 1993; Van Scotter, 1994; and Department of the Air Force, 1988). In 1995, Hurry performed a survey of 84 Air Force officers where the officers were tasked to rate the importance of 100 behaviors selected from these validated behaviors because of their particular relevance to Air Force junior officers. The behaviors indicated four dimensions of overall performance. These behaviors and their mean importance as found in this survey are listed in Appendix A through Appendix D.

Pilot Survey

The pilot survey for this research is not provided for reference because it is very similar to the full survey included in Appendix F. The pilot survey was developed to test the survey instrument, ask for suggestions on the survey instrument, check for the necessary sample size for the full survey instrument, and provide some preliminary results to test the analysis tools chosen for this research. Two versions of the survey were created. The first version will be referred to as the normal version and the second version will be referred to as the reverse-ordered version. The second version is reverse-ordered

and the 12 female profiles on this survey correspond to 12 identical male profiles on the normal version. The 12 female profiles on the normal version likewise correspond to 12 identical male profiles on the reverse-ordered version.

Sample and Procedure.

Twenty-eight Air Force officers in the ranks of Captain through Colonel were selected randomly from the population of faculty and staff officers at the Air Force Institute of Technology, making this a sample of convenience. These officers were informed that completion of the survey was voluntary. A total of 17 officers completed and returned the survey for a 61% response rate. The surveys were placed in each officer's mailbox and returned to the researcher through the internal mail distribution system. Half (14) of the officers received the normal survey and the other half (14) received the reverse-ordered survey.

Survey Instrument.

The first part of the survey was devoted to gathering the demographic information necessary to test for group differences in rating policy.

The profiles were developed through a series of steps. The first step was to design a scenario that could realistically be encountered by an Air Force officer. This was attempted because of the emphasis placed on realism by Hobson and Gibson (1983). The scenario in Figure 4 at the top of the next page was developed for this purpose.

You have just been selected to validate ratings given to junior officers that attended Squadron Officer School (SOS). For some time, SOS has been concerned about the validity of the performance ratings that SOS flight commanders provide for their flight members. To validate past performance ratings, SOS has requested your help.

SOS has provided you with a list of profiles. Each of these profiles has four behaviors that were extracted from actual training reports. All of the behaviors fit into four broad categories of behaviors as follows:
Leadership—The art of influencing and directing people to accomplish the mission.
Task Performance—The proficiency with which an individual performs activities that are formally recognized as the technical or specialized activities that define his or her job.
Interpersonal Facilitation—The extent to which a worker supports other members of the organization through expressions of concern, consideration, cooperative and helpful acts.
Job Dedication—The extent to which a worker goes above and beyond the requirements of their official job description and exceeds the minimum expectations of their rater.

Keep in mind that all of the behaviors you will see in the following profiles are positive behaviors (in keeping with Air Force training report and OPR tradition). Some of the behaviors, though, are "more positive" than others and so should be more highly rated relative to those "less positive" behaviors.

The category of each behavior is also provided with each profile.

Your job is simple. Read each behavior and then rate the behavior using the rating scale provided. The scale is a 5-point scale with the value of the behavior increasing as you move to the right. A rating in the far right box would indicate above average performance, while a rating in the far left box would indicate average performance. Place an X in the box that you feel best describes the behavior or overall rating. Then provide an overall rating for the profile based upon your evaluation of the four behaviors. There are 48 profiles.

Figure 3. Survey Scenario

The second step was to group the behaviors together into profiles so that each profile was represented by one behavior from each of the four dimensions of performance. The behaviors gathered and rated for importance by Hurry were divided into quartiles based upon their mean importance (1995). Then, the behaviors were systematically assigned to profiles so that each profile would be average. This was accomplished by combining the behaviors so that each profile had a behavior from a

separate quartile of each dimension. For example, profile one would have a leadership behavior from the fourth quartile, a task performance behavior from the third quartile, an interpersonal facilitation behavior from the second quartile, and finally a job dedication from the first quartile. This resulted in 24 unique combinations of behaviors from the quartiles and these same combinations were repeated for 24 more profiles resulting in 48 total profiles. Table 1 shows an example of the combinations of behaviors used to produce the first six profiles.

Table 1. Behavior Consolidations for Profile Construction

Behavior Dimension	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6
Leadership Quartile	4	4	4	4	4	4
Task Performance Quartile	3	3	2	2	1	1
Interpersonal Facilitation Quartile	2	1	1	3	2	3
Job Dedication Quartile	1	2	3	1	3	2

These combinations of behaviors resulted in profiles that represent an average junior officer. This should ensure that any differences found in importance should be attributable to the importance of the behaviors, and not the spurious result of a different type of combination where one profile has four very important behaviors or four unimportant behaviors.

After combining the behaviors into profiles, the behaviors were randomly shuffled so that no distinct order of behavior dimensions would be evident. This step overcomes the weakness found in a previous study where the same order of behaviors was used for each profile. The resulting order of importance of the dimensions mirrored the order of the behaviors within the profiles (Hurry, 1995).

The next step entailed assigning last names to the profiles. A list of last names was generated alphabetically and a last name was assigned to each profile. Then the profiles were randomly shuffled to remove that alphabetical order of the last names.

Finally, a list of 96 first names was generated for the gender portion of this study. Of the 96, half were male names and half were female names. These names were incorporated into a questionnaire and 30 respondents (chosen for convenience) were asked to rate whether a name was male, female, or could easily be male or female. Only those names with 100% inter-rater agreement on gender were chosen for use in this study. These first names were assigned to a duplicate survey using 36 male names and 12 female names. Twelve female names were chosen for each survey because the ratio of female names to male names approximates the ratio of females to males in the Air Force.

The next portion of the survey instrument was devoted to measuring several personality trait facets. This researcher chose facets from the International Personality Item Pool (IPIP). It was necessary to limit the facets in an effort to keep the survey to a reasonable length, so facets were chosen for their interest to the research at hand. The facets chosen included Friendliness, Assertiveness, Intellect, Trust, Altruism, Self-Efficacy, and Cautiousness. Each of these facets includes ten measurement items. The 70 personality measures were randomized and scored on a 5 point Likert scale.

The final portion of the personality assessment was the Brief Measures of Positive and Negative Affect: The PANAS Scales (Watson, Clark, and Tellegen, 1988). These items were measured using the time frame "the last year". This way, the measures better reflect long-term traits versus short-term moods.

The last section of the pilot survey was a section requesting respondents write their feelings about the survey: likes, dislikes, and areas that may need improvement. These suggestions were used to refine the full survey as discussed later.

A second survey was created with the profiles reverse-ordered to remove any order effects. The profiles were also assigned 36 male names and 12 female names. However, this survey was designed so that each female profile corresponded to a male profile on the other survey. This allows a paired sample analysis to be performed to check for ratee gender effects.

Final Survey

The final survey is similar to the pilot survey, although some suggestions were incorporated from the pilot and will be discussed next. The final survey instrument is included for reference in Appendix F.

Suggestions and/or Comments Received on the Pilot Survey.

The following suggestions were received from respondents of the pilot survey. The response (R) to each comment (C) immediately follows the comment.

(C) Did participants complete the survey in same environment?

(R) Although a valid concern, this cannot be controlled for on a mail survey.

(C) How many participants put the survey down and came back to it?

(R) Although a valid concern, this cannot be controlled for on a mail survey.

(C) Time, time, time!

(R) This survey was long, but that is a product of the necessity to have 10 items for each variable being measured.

(C) Why not use 1-3 scale versus 1-5 scale on the [personality measures]?

(R) These items were measured as suggested by the researchers who developed these scales, using the directions provided by them.

(C) Will there be low variability because of no negative behaviors in profiles?

(R) This is a valid comment and is a weakness of this study. This is discussed in further detail in Chapter V. However, one point of this research is to validate or invalidate a previous research effort that used only positive behaviors. If this research varies too far from that original research effort, it cannot be reliably compared to it.

(C) Have a practice page.

(R) The survey is already too long and a practice page would make it even longer.

(C) Repeated behaviors seemed excessive.

(R) This comment led to a reevaluation of the profile construction and an error was discovered in the way they were created. This will be discussed later in this chapter under Changes Made for the Final Survey.

(C) The survey does not capture the added assessment consideration when a junior officer is filling a certain type of job that may require added excellence in one or more dimensions by nature of the job itself.

(R) This is an insightful comment on one of the weaknesses of this survey, its generalizability to the real world of performance appraisals. This weakness will be discussed in Chapter V, Discussion and Conclusions.

Changes Made for the Final Survey.

The most notable change from the pilot survey to the final survey was the change in the profile construction. One of the comments received [multiple times] on the pilot survey led this researcher to examine the profile construction. An error was made in the construction resulting in much more duplication of behaviors and profiles than was intended. This error, combined with the method of selecting combinations of behavior resulted in an unacceptably high inter-item correlation between profiles, correlations greater than .3. This would result in a high level of interdependence between dimensions in the results and mask the true contributions of each dimension to the overall performance rating. Two steps were taken to alleviate this problem. First, the profiles were reconstructed to remove duplicate profiles and ensure that no individual behavior was repeated more than twice. Only 12 of the 92 behaviors were repeated twice, and the others were only repeated once. This resulted in an inter-item correlation that was still too high (see Table 2). As you can see, most of the correlation problem stems from the leadership dimension. Therefore, the leadership behaviors were randomly shuffled and reassigned to the profiles. This resulted in an acceptable inter-item correlation while maintaining as much of the original effort to ensure "average" profiles as possible. Table 3 shows the resulting correlations.

Table 2. Pilot Between Profile Correlation of Behavior Dimensions (high correlation)

	Leadership	Task Performance	Interpersonal Facilitation	Job Dedication
Leadership	1			
Task Performance	-0.163371	1		
Interpersonal Facilitation	0.3129146	0.037227	1	
Job Dedication	-0.160955	-0.000242	0.0176697	1
				n=48

Table 3. Final Survey Between Profile Correlation of Behavior Dimensions

	Leadership	Task Performance	Interpersonal Facilitation	Job Dedication
Leadership	1			
Task Performance	-0.11162	1		
Interpersonal Facilitation	0.031456	0.037227	1	
Job Dedication	-0.09429	-0.00024	0.01767	1
				n=48

Another important change to the final survey was the decision to concentrate on only the Conscientiousness factor of the IPIP personality measure. Partially measuring 4 different factors resulted in an incomplete picture, but the lengthiness of the survey made it impractical to add all the items to measure all 4 factors. Therefore, the Conscientiousness factor was chosen to be measured fully, using all 6 facets: Self-Efficacy, Orderliness, Dutifulness, Achievement Striving, Self-Discipline, and Cautiousness. This resulted in 60 items randomized into the full survey. The Conscientiousness factor was chosen because it showed the most promise for significant results in the pilot survey analysis and in previous research on rater leniency (Bernardin, Cooke, and Villanova, 2000).

The other changes to the survey were made for aesthetic and user-friendliness reasons. The instructions were simplified to reduce the amount of reading required by the respondents. The profiles were changed to present more delineation between the different behaviors, to heighten the impact of the name associated with each profile, and to make each profile separate and more visually pleasing.

Sample and Procedure.

Wright-Patterson AFB, OH, Maxwell AFB, AL, Langley AFB, VA, and Peterson AFB, CO were selected for this survey as they each are indicative of one of the four following major commands: Air Force Materiel Command (AFMC), Air Combat Command (ACC), Air Force Space Command (AFSPC), and Air Education and Training Command (AETC). 100 officers from each base were randomly selected to participate in the survey from the population of officers in the grades of Captain (greater than 7 years) through Lieutenant Colonel. Half of the officers at each base received the normal survey instrument, while the other half received the reverse-ordered survey instrument. 100 students from AFIT in the grades of Second Lieutenant through Major also received the survey. Half received the normal version and half received the reverse-ordered version. Finally, 50 students attending Defense Acquisition University continuing education courses received the survey; half received the normal version and half received the reverse-ordered version. The DAU and AFIT students were a sample of convenience intended to supplement the mail survey and bolster the sample size in the event of a poor response rate.

One hundred and forty-eight of the 400 surveys were returned from the mail distribution to the four different Air Force bases for a 37 percent response rate. Of the 148, 12 were deemed unusable because they were incorrectly filled out. Fifty-six of the 100 surveys were returned from the AFIT students, a 56 percent response rate. Of the 56 surveys, 4 were deemed unusable because they were improperly completed. Twenty-four of the 50 DAU students returned the survey, a 48 percent response rate. Of the 24, 3 were deemed unusable due to missing data.

Analysis

All analyses in this research will be performed using SPSS, Version 10.0 for Windows®, Microsoft Excel 2000, Version 9.0.2720, and JMPIN, Version 3.2.6. This research will use multiple regression analysis to test whether leadership, task performance, interpersonal facilitation, and job dedication each explain a unique portion of the variance in dimension ratings and overall performance ratings.

The first step in the analysis was the preliminary work to ensure the assumptions of normality and homoscedasticity are met. Then, a reliability analysis of the personality facets, PA and NA, was performed to ensure that the responses display reliability commensurate with published work on these items. Then the personality items were combined into their respective facets. The facets were combined into their factor, and the PA and NA items were summated into their scales. This test for reliability was conducted with Cronbach's alpha as the measurement statistic.

The profiles for each returned survey were analyzed to develop a regression equation for each respondent. This equation represented the rating policy for that respondent. The unstandardized beta weights for each dimension (leadership, β_{ld}; task performance, β_{tp}; interpersonal facilitation, β_{if}; and job dedication, β_{jd}) represented the relative importance of each performance dimension to the dependent variable, the overall performance rating. The equation included a term for each behavior dimension, a term for the order of each dimension in the profile, a term for the gender of the profile, two terms for the minimum and maximum ratings given, and a full interaction examination between gender and each of the four dimensions of behavior.

The beta weights for each respondent were combined into a data set for further regression analysis. First, the beta weights were subjected to an analysis of means to identify if the mean importance of each dimension differed from the others at the sample level. Then, the beta weights for each respondent were combined with their demographic data, personality facet scores, and PA and NA scores. The personality facets were also aggregately examined at the factor level. Then, several regressions were performed. The first was with adjusted R^2 as the dependent variable (as a proxy for rating consistency) to test whether rank or any other variable influenced the consistency of the rater. A regression was also performed to see if any of the variables could be used to predict rating leniency, as measured by average overall performance. The next four regressions included each behavior beta weight, in turn, to see if any of the other variables could be used to predict the beta weights. This analysis tested the same

questions of variance, except the results identified if any other measured variables could be used to predict beta weights.

Finally, the mean scores for each profile across respondents were subjected to a paired sample T-test to provide a second look at possible ratee gender effects that did not show up during the regression. The paired sample test was possible because there were 24 profiles on both surveys that had the same behavior order and behaviors, but 12 had female names and 12 had male names.

IV. Results

Demographic Information

Tables 4 through 8 provide the sample demographics. Note that four Colonels were included in the sample. Either they filled out the survey for a missing respondent, or were promoted to Colonel and the computer database that generated the sample had not yet been updated. From Table 6 you can see that female respondents were underrepresented in the results. This resulted from the random nature of the sample selection. Females were underrepresented in the sample selected, but had a response rate comparable to the overall response rate.

Table 4. Survey Type

	Normal Version	Reversed Version
Number Returned	94	115
Percentage	45%	55%

Table 5. Rank of Respondents

	2nd Lt	1st Lt	Captain	Major	Lt Colonel	Colonel
Number Returned	6	13	73	67	46	4
Percentage	3%	6%	35%	32%	22%	2%

Table 6. Gender of Respondents

	Male	Female
Number Returned	186	23
Percentage	89%	11%
Air Force Percentage	83%	17%

Table 7. Job Category of Respondents

	Analyst/Engineer	Medical	Nonrated Ops	Rated	Support	Other
Number Returned	25	7	16	31	128	2
Percentage	12%	3%	8%	15%	61%	1%

Table 8. Commissioning Source of Respondents

	Academy	OTS	ROTC	Other
Number Returned	36	59	100	14
Percentage	17%	28%	48%	7%
Air Force Percentage	21%	21%	44%	14%

Personality Items and PANAS—Correlation, Reliability, and Factor Analyses

The correlation of the personality and PANAS items indicated that a reliability analysis could be done and would probably generate adequate results. Most of the correlations between items designed to measure the same facets or factors were greater than .4 and all but one were significant at the $p < .01$ level. That one was significant at the $p < .05$ level.

Table 9 lists the personality facets with their numerical reference (C1-C6). The reliability analysis turned out very favorable results. The personality facets were very similar to published IPIP results with the exception of C6. These reliabilities also compared favorably to results achieved with the NEO FFI. Table 9 reports the coefficient alpha of each personality facet: C1, C2, C3, C4, C5, and C6. It also reports the published reliability of the IPIP and Costa and McRae's NEO PI (1992) for comparison. The results indicate that the items can be combined into summated scales that are reasonably reliable. The reliability of the facets with respect to the factor Conscientiousness was also very favorable.

Table 9. Reliability Analysis Results for Conscientiousness Factor

Personality Facet	Coefficient Alpha	Published IPIP Alpha	Published NEO PI Alpha
C1-Self-Efficacy	.8456	.78	.70
C2-Orderliness	.8338	.82	.74
C3-Dutifulness	.7201	.71	.67
C4-Achievement Striving	.8335	.78	.67
C5-Self-Discipline	.8654	.85	.80
C6-Cautiousness	.5393	.76	.70
Summated Scale	.7158	.80	.75
			n=209

The first six facets in Table 9, representing one personality factor, were submitted to a factor analysis. The analysis used Principle Component Analysis with a Varimax rotation. The Varimax Principal Component Analysis rotation was chosen because it is the method used by the research that developed this type of five-factor personality model (Costa and McRae, 1992 and Goldberg, 1999). Only two factors were extracted with eigenvalues of 3.097 and 1.021. As you can see in Table 10, C2 and C6 loaded significantly against the second component and C3 exhibited significant cross loadings. For this reason, a manual extraction of factors was also performed. In Table 11, you can see that the facets did load at a high level against the one component. Because of this complication, however, all further analysis examined these personality constructs at both the individual facet level and at the factor level.

Table 10. Factor Analysis Varimax Rotation

	Component	
	1	2
C1-Self-Efficacy	.879	1.928E-02
C2-Orderliness	8.612E-02	.797
C3-Dutifulness	.529	.515
C4-Achievement Striving	.899	.208
C5-Self-Discipline	.731	.377
C6-Cautiousness	.189	.771
		n=209

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Table 11. Factor Analysis Manual Extraction

	Component
	1
C1-Self-Efficacy	.737
C2-Orderliness	.520
C3-Dutifulness	.727
C4-Achievement Striving	.860
C5-Self-Discipline	.816
C6-Cautiousness	.591
	n=209

Extraction Method: Principal Component Analysis.
a. One component extracted.

The PANAS measures were also highly reliable with coefficient alphas of .9030 for PA and .8726 for NA. Table 12 shows the factor analysis for the measures. This was a manual extraction of two factors using Principle Component Analysis and a Varimax rotation. The factors had eigenvalues of 5.430 and 4.797. The free extraction resulted in two further factors with eigenvalues of 1.336 and 1.041, but they were not as clean as the

first two components. It appears that these measures can be reliably combined into their respective scales, PA and NA, for use in further analysis.

Table 12. Factor Analysis PANAS Scales, Manual Extraction

	Component	
	1	2
PA1	.751	-8.158E-02
PA2	.713	.176
PA3	.604	1.666E-02
PA4	.812	-1.701E-02
PA5	.748	-4.638E-02
PA6	.689	-.138
PA7	.777	9.020E-03
PA8	.770	1.744E-02
PA9	.767	3.832E-02
PA10	.679	-4.620E-02
NA1	-3.490E-02	.686
NA2	-8.551E-02	.709
NA3	6.350E-02	.627
NA4	-2.207E-02	.744
NA5	-8.732E-02	.614
NA6	-3.336E-02	.690
NA7	2.880E-02	.576
NA8	-4.067E-02	.734
NA9	8.991E-02	.708
NA10	3.797E-02	.781
		n=209

Rotated Component Matrix.
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

The First Level Regression of Each Respondent's Profiles

The analysis of the data resulted in 229 first level regressions with the resulting R^2, F scores, and beta weights. There were 18 cases excluded from analysis because the R^2 value was below .5, the result of 2 or more insignificant beta weights for the behavior

dimensions. Two other cases were excluded because the respondents had one or more negative beta weights, which has no logical basis. The order terms, gender dummy variable, and interaction terms were insignificant for most of the respondents. The minimum and maximum terms, considered together, were insignificant for most of the respondents. Therefore, the final regression reported here is the result of the following equation: $op = \beta_0 + \beta_{ld}(x_1) + \beta_{tp}(x_2) + \beta_{if}(x_3) + \beta_{jd}(x_4)$. The R^2 values are reported in Table 34 in Appendix E.

Results for the Individual Behavior Ratings

First, descriptive statistics of each of the four dimensions' individual behavior ratings was performed and is reported in Table 13. For simplicity, leadership, task performance, interpersonal facilitation, and job dedication will be referred to from this point as LD, TP, IF, and JD respectively. All behavior ratings in each dimension have relatively low kurtosis and skewness. The means are also very close to each other, which was one of the objectives of the behavior combinations. Note that LD had less variance than IF and JD, but more than TP. Tables 14 through 17 display the mean of each behavior used in this research. The behaviors are ranked by means in descending order for each behavior dimension. The sample size for the computations was n=229. Although 20 respondents were removed from the regression analysis for the stated reasons, there was no logical basis for any removals from the means analysis. The regression required statistically meaningful, logical beta weights, but there was no reason to invalidate the individual behavior ratings.

Table 13. Descriptive Statistics for the Individual Behavior Dimension Ratings

LD		TP		IF		JD	
Mean	5.15	Mean	5.19	Mean	4.934	Mean	5.22
Standard Error	0.02	Standard Error	0.02	Standard Error	0.017	Standard Error	0.02
Median	5	Median	5	Median	5	Median	5
Mode	5	Mode	5	Mode	5	Mode	6
SD	1.18	SD	1.15	SD	1.19	SD	1.24
Variance	1.40	Variance	1.32	Variance	1.42	Variance	1.53
Kurtosis	0.55	Kurtosis	-0.18	Kurtosis	0.23	Kurtosis	0.57
Skewness	-0.59	Skewness	-0.29	Skewness	-0.45	Skewness	-0.67
Range	6	Range	6	Range	6	Range	6
Minimum	1	Minimum	1	Minimum	1	Minimum	1
Maximum	7	Maximum	7	Maximum	7	Maximum	7
Sum	25708	Sum	25913	Sum	24631	Sum	26049
n	4992	n	4992	n	4992	n	4992

Table 14. Leadership Behavior Means

Behavior	Means
Uses good judgment in decision making	6.193
Reacts confidently when the unexpected occurs	5.789
Recognizes and encourages effective performance	5.721
Resolves conflicting organizational demands	5.546
Guides and directs subordinates effectively	5.541
Keeps subordinates focused on mission requirements	5.496
Works to create an effective unit atmosphere	5.426
Assigns subordinates duties and responsibilities appropriate for their abilities	5.345
Resolves conflicts between members of the unit	5.328
Provides appropriate feedback to subordinates	5.277
Supports subordinates	5.242
Makes tough decisions quickly	5.242
Ensures deadlines and performance standards are met	5.227
Persuades others both inside and outside the organization	5.192
Coordinates subordinates' efforts to minimize conflicts	5.146
Represents the group effectively	5.055
Takes a position on controversial issues	5.013
Speaks effectively	4.993
Behaves consistently with subordinates	4.873
Monitors the status of work in progress	4.603
Maintains high visibility both on and off the job	4.539
Avoids trespassing on others' responsibility areas	4.320
	n=229

Table 15. Task Performance Behavior Means

Behavior	Means
Solves urgent, unexpected problems expertly	6.175
Solves technical problems expertly	5.766
Anticipates potential problems	5.739
Accomplishes job tasks expertly	5.729
Troubleshoots expertly	5.643
Provides expert technical advice to others	5.483
Uses technical expertise to meet real world needs	5.432
Communicates task information effectively	5.408
Writes clearly and concisely	5.335
Performs specialized tasks skillfully	5.333
Prioritizes work tasks efficiently	5.330
Collects and accurately interprets information	5.159
Keeps up with the newest technology	5.039
Plans and organizes work	4.893
Provides others with current technical information	4.865
Operates equipment skillfully	4.764
Uses equipment, tools, and computers proficiently	4.690
Performs routine tasks efficiently	4.644
Uses technical material effectively	4.548
Performs safely	4.223
	n=229

Table 16. Interpersonal Facilitation Behavior Means

Behavior	Means
Praises coworkers when they are successful	5.517
Helps someone without being asked	5.480
Talks to others before taking actions that affect them	5.474
Develops and maintains good working relationships	5.421
Listens to others' ideas about getting work done	5.421
Encourages others to overcome differences and get along	5.384
Voluntarily pitches in to help the group	5.328
Encourages coworkers to stick together in hard times	5.317
Cooperates with others in the team effectively	5.308
Lends a hand when a coworker needs it	5.306
Supports or encourages coworkers	5.247
Displays concern for others	5.153
Seeks others opinions	5.127
Offers to help others do their work	5.035
Displays a cheerful, confident outlook	5.035
Coordinates actions with others	5.022
Shows respect for others	5.000
Treats others fairly	4.924
Says things to reduce conflicts	4.766
Says things to make people feel good about themselves	4.731
Offers friendly advice	4.493
Gives coworkers advice about how to do their jobs	4.487
Acts courteously	4.417
Gets along with others	4.404
Acts warm and sociable	4.253
Avoids arguments	3.299
	n=229

Table 17. Job Dedication Behavior Means

Behavior	Means
Asks for challenging work assignments	5.784
Strives to excel	5.742
Takes the initiative to solve a work problem	5.738
Volunteers for difficult assignments	5.712
Tackles a difficult work assignment enthusiastically	5.642
Adapts to difficult conditions	5.603
Overcomes obstacles to complete a task	5.568
Pays close attention to important details	5.535
Takes responsibility for his/her actions	5.526
Ensures work is done right	5.520
Puts extra effort into a task	5.415
Puts in extra hours to get work done on time	5.402
Overcomes hardships	5.271
Gives up personal time for the mission	5.236
Volunteers for additional duties	5.218
Defends the supervisor's decisions	5.114
Avoids shortcuts when work is overdue	4.987
Performs consistently and reliably	4.980
Works hard	4.856
Complies with instructions even when supervision is not present	4.819
Shows respect for authority	4.801
Displays proper military appearance and bearing	4.491
Follows the supervisor's instructions	4.410
Renders proper military courtesy	4.297
	n=229

The individual behavior means from the final survey respondents were tested to see if they were statistically the same as the means found in the pilot study and the means found by Hurry (1995). A two-tailed, paired sample analysis indicated that the means were statistically different from Hurry's means ($p=.002$) and different from the pilot study's means ($p=.001$). The final survey individual behavior means were not significantly correlated with Hurry's (1995) means, or with the pilot survey means (two

tailed test, alpha=.05). The means comparison results are summarized in Table 18, while the correlation table is shown in Table 19.

Table 18. Means Comparison Summary Table

Means Comparison	p-value	Survey	Means
Final Means to Pilot Survey Means	.001*	Hurry's	5.40
Final Means to Hurry's Means	.002*	Pilot	4.92
*Indicates statistically significant difference		Final	5.16
			n=92

Table 19. Correlation Table of Means

	Final Means	Hurry Means	Pilot Means
Final Means	1		
Hurry Means	-0.113287882	1	
Pilot Means	0.004491415	0.031072635	1
Alpha =.05 All correlations are statistically insignificant. n=92			

In an effort to confirm the reliability of the behavior measures, two random sub samples (n=50) were pulled from the final survey data for comparison. Table 20 shows the results of a comparison of the sub samples' behavior means. As you can see, the paired sample comparison shows the means are statistically different from each other, but the samples are highly correlated. The number of observations indicates the number of behaviors, while the number of original respondents represented in these sub samples is 50. Table 21 shows the correlation between the two sub samples was .963 and this correlation is significant at p=.01.

Table 20. Final Survey Sub Sample Comparison of Means

	Sample 1 Means	Sample 2 Means
Mean	5.135122306	5.236624179
Variance	0.228140284	0.220689517
Observations	92	92
Pearson Correlation	0.962789072	
Hypothesized Mean Difference	0	
df	91	
t Stat	-7.520020973	
P(T<=t) one-tail	1.86544E-11	
t Critical one-tail	1.661771876	
P(T<=t) two-tail	3.73087E-11	
t Critical two-tail	1.986377356	

Table 21. Sub Sample Comparison Correlation Table

	Sample 1 Means	Sample 2 Means
Sample 1 Means	1	
Sample 2 Means	0.963*	1
*Significant at p=.01.		

Results for Differences in the Relative Importance of Performance Dimensions

First, descriptive statistics of each of the four dimension's beta weights were performed. The descriptive statistics are reported in Table 22. Note that although they all have very low variance, IF has the most variance, .009. All of the dimensions display positive kurtotic tendencies. These results explain why IF was the only dimension to pass the test for normality, discussed later. It has the least kurtosis and skewness and also has the greatest variance. This will necessitate a nonparametric examination of the data.

Table 22. Descriptive Statistics of the Four Dimensions' Beta Weights from Regression on Overall Performance

LD		TP		IF		JD	
Mean	0.282	Mean	0.257	Mean	0.254	Mean	0.2679
Standard Error	0.006	Standard Error	0.006	Standard Error	0.006	Standard Error	0.006
Median	0.282	Median	0.255	Median	0.254	Median	0.266
Mode	0.313	Mode	0.185	Mode	0.247	Mode	0.288
SD	0.088	SD	0.081	SD	0.093	SD	0.084
Variance	0.007	Variance	0.007	Variance	0.009	Variance	0.007
Kurtosis	6.229	Kurtosis	1.687	Kurtosis	0.894	Kurtosis	2.179
Skewness	1.058	Skewness	0.436	Skewness	0.058	Skewness	0.384
Range	0.81	Range	0.562	Range	0.599	Range	0.638
Minimum	0.003	Minimum	0	Minimum	0	Minimum	0
Maximum	0.813	Maximum	0.562	Maximum	0.599	Maximum	0.638
Sum	59.059	Sum	53.836	Sum	53.091	Sum	55.991
n	209	n	209	n	209	n	209

Table 34 in Appendix E also reports the beta weights for each respondent. Only 52 out of 916 individual beta weights were not significant at the $p<.05$ level. These insignificant beta weights will be included in this analysis because the insignificance of these beta weights means that they cannot be determined significantly different from zero. These beta weights were nearly zero, so their inclusion in the analysis makes sense. The exception for the inclusion of the beta weights will be the exclusion of regressions with R^2 values below .5. These regressions had 2 or more insignificant beta weights and represented poor fitting relative to the rest of the sample.

These beta weights will be used in the second set of regression analyses. But first, a comparison of means is necessary to test one of the hypotheses for this research. Table 23 includes the mean beta weights for the entire sample and various sub samples.

Using Excel's two-sample F test for equal variances and Levene's test for equal variance, the beta weights all have statistically significant equal variances (alpha=.05). The analysis found that there was no difference in the rating policies of officers when considering gender, job category, or commissioning source. There were some subtle differences in rating policies by rank, however.

Table 23. Mean Beta Weights for Behavior Dimensions of Sample and Various Sub Samples Derived from Regression on Overall Performance

	n	LD	TP	IF	JD
Entire Sample	209	0.283*	0.258	0.254	0.268
Majors and Above	117	0.293*	0.257	0.252	0.271
Captains and Below	92	0.269	0.259	0.257	0.264
AFIT Students	52	0.277	0.255	0.278	0.265
DAU Students	21	0.275	0.247	0.243	0.275
Mail Respondents	136	0.286*	0.260	0.247	0.268

Notes: All tests were two-tailed tests for equal means.
The significance level for all tests was alpha=.05.
*Statistically different from TP and IF and statistically same as JD.
All other comparisons were statistically the same.

For the entire sample, LD was statistically the same as JD and more important than TP and IF at the $p<.05$ level, although the p value for the LD, JD comparison was .08. JD, TP, and IF were statistically the same. For Majors and above, the same relationship as before held, although the p value for the LD, JD comparison was .07. The other three dimensions were the same. For Captains and below, all four dimensions were statistically the same at the alpha=.05 level. For AFIT students, all four dimensions were statistically the same at the alpha=.05 level.

The DAU students also felt that all four dimensions were statistically the same at the alpha=.05 level. Finally, mailed survey respondents felt that LD was the same as JD, but different from the other two dimensions. JD, IF, and TP were all statistically the same.

The data is also approximately normally distributed in the normal probability plot generated in SPSS, but only interpersonal facilitation passed the Kolmogrorov-Smirnov test of normality. SPSS considers .2 to be the lower bound of significance in this test, and interpersonal facilitation's significance was .2. Table 24 shows the test of normality results.

Table 24. Test of Normality

	Kolmogorov-Smirnov Statistic	df	Sig.
LD	.060	209	.061
TP	.081	209	.002
IF	.054	209	.200
JD	.073	209	.009

* This is a lower bound of the true significance.
Lilliefors Significance Correction

Because the four performance dimensions tested so poorly for normality, it was necessary to perform nonparametric statistics to verify the results found on the two-tailed test between dimensions. The Tukey-Kramer analysis was chosen and performed in JMPIN with alpha=.05. The Compare All Pairs method was chosen to achieve an exact alpha-level test since this research has equal sample sizes. The results mirrored the two-tailed results for the entire sample. LD was significantly greater than TP and IF, but the same as JD. JD, IF, and TP were not statistically different from each other. This is

denoted in the bottom half of Table 25 by the positive values at the intersections LD/TP and LD/IF.

Table 25. Tukey-Kramer HSD Means Comparisons

Dif=Mean [i]-Mean [j]	**LD**	**JD**	**TP**	**IF**
LD	0.000000			
JD	-0.01468	0.000000		
TP	-0.02499	-0.01031	0.000000	
IF	-0.02856	-0.01388	-0.00356	0.000000
Abs (Dif)-LSD**	**LD**	**JD**	**TP**	**IF**
LD	-0.02183			
JD	-0.00715	-0.02183		
TP	0.003160**	-0.01152	-0.02183	
IF	0.006724**	-0.00796	-0.01827	-0.02183

Alpha=0.05 and q*=2.57429
Comparisons for all pairs using Tukey-Kramer HSD
**Positive values show pairs of means that are significantly different.

Another necessary comparison is how different groups felt about a certain dimension. An examination of the data shows that higher-ranking officers' mean leadership beta weight was significantly higher than the lower-ranking officers' mean leadership beta weight at the $p<.05$ level. There are other differences in the different sub samples between AFIT, DAU, and mail respondents, but they can also be explained by the difference between the ranks because the AFIT and DAU students were, with a few exceptions, Captains and below, while the mail respondents were comprised of mostly Majors and above. This will be discussed further in Chapter V.

Second Level Regression

The second level regression uses each of the unstandardized beta weights as dependent variables, in turn. All of the demographic items, personality facets, and

PANAS were independent variables. None of these regressions produced significant results. This analysis was done using a stepwise regression and no variables were entered with a probability of F to enter of .05 and remove of .10. Correlation and covariance matrices were produced to examine the feasibility of analysis using SEM methodology, but there were only two significant correlations between the beta weights and any of the other variables. β_{ld} was correlated with C2, Orderliness, at the .05 level. This correlation was .136. Also, Positive Affectivity was negatively correlated with β_{tp} at the .05 level. This correlation was -.134. The covariance matrix showed covariance between beta weights and all other variables was nearly 0. Therefore, a SEM analysis was not performed.

Consistency Results

A stepwise regression was used for this analysis with the same probability of F to enter and remove as previously mentioned. A significant model was not found. A further analysis was performed, guided by the results achieved in the pilot survey. The pilot survey found a significant regression model with the variables PA, Total Active Federal Military Service years, and C6 (Cautiousness) predicting rater consistency.

The pilot survey respondents were almost exclusively Majors and above, so the final survey data was reexamined using only Majors and above from the full survey respondents. The SPSS output tables are shown in Tables 26 through 28. This is the final model after all other insignificant variables have been removed. The results were weak but significant, with an R^2 value of .041 and an F score of 4.926. This result is

similar to that found in the pilot study. TAFMS represents the total time a respondent has been in the Air Force.

Table 26. Model Summary for Consistency Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.203	.041	.033	9.2923E-02

a. Predictors: (Constant), TAFMS

Table 27. ANOVA Table for Consistency Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.254E-02	1	4.254E-02	4.926	.028
	Residual	.993	115	8.635E-03		
	Total	1.036	116			

a. Predictors: (Constant), TAFMS
b. Dependent Variable: r_squared

Table 28. Coefficients Table for Consistency Regression

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.676	.034		19.682	.000
	TAFMS	4.379E-03	.002	.203	2.220	.028

a. Dependent Variable: r_squared

Leniency Results

The mean overall importance for each respondent was also examined to look for relationships between rater leniencies and the personality facets, PA or NA. There were five significant relationships between average overall performance and C3, C4, C5, Conscientiousness, and PA. These are shown in Table 29.

Table 29. Significant Correlations Between Average Overall Performance and Personality Measures

		C3	C4	C5	CON	PA
AVG OP	Pearson Correlation	.164*	.249**	.252**	.245**	.228**
	Sig. (2-tailed)	.017	.000	.000	.000	.001
	n	209	209	209	209	209

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Ratee Gender Effects Results

The ratee gender was entered into the first level regression as a dummy variable and no significant effect was found. However, the survey was designed to allow a paired sample comparison of means of the ratings received across respondents for overall performance and the four performance dimensions. There were no significant mean differences at the p= .05 level when these means were compared using a two-tailed paired mean t-test. The reported p value was .81. The reported mean for female profiles was 5.142, while the reported mean for male profiles was 5.128.

V. Conclusions and Discussions

Relative Importance of Behavior Dimensions to Overall Performance

The results suggest that the order effect found in Hurry's 1995 research resulted in spurious results. However, leadership is still the most important performance dimension by a narrow margin. This does not mean that junior officers should focus on leadership behaviors, which is discussed in greater detail in "Weaknesses." It does mean that the Air Force organizational norm is that leadership behavior is slightly more important than other behavior dimensions in determining overall performance. Training programs, therefore, should perhaps examine their curriculum to see if this importance is recognized. If it is not, then a policy decision should be made to decide if leadership should be emphasized more than the other behavior dimensions. If the slightly greater importance of leadership is recognized in the training curriculum, perhaps this survey merely captured the results of an effective training program.

The first level regression resulted in very clean results with nearly all behavior dimensions having individual significance in the model. The interpretation of this result is that each respondent had his or her own priority about which behavior dimensions were most important and this priority showed up in the regression. When the entire sample was considered, however, the individual priorities canceled out for task performance, interpersonal facilitation, and job dedication, leaving leadership as the one different dimension. The final equation used to predict overall performance with the four performance dimensions is $OP = \beta_1 + .283(ld) + .258(tp) + .254(if) + .268(jd)$. An

example of this equation in action would be to consider a junior officer who scored a 4, 6, 5, and 7 in leadership, task performance, interpersonal facilitation, and job dedication respectively. If that junior officer were evaluated with this equation, his/her overall performance would be rated a 5.8.

Interestingly, officers in the grade of Majors and above had a different policy than company grade officers (CGOs). The officers who actually rate junior officers felt that leadership was the most important dimension, an important discovery. CGOs, however, felt that all of the dimensions were equally important. This disparity identifies a curious situation. The CGOs of today are the Majors and above of tomorrow. This gap could be the product of a change in the Air Force culture that has not caught up to the senior ranks yet, or it could be that the survey found a change in policy that takes place in officers as they gain in rank and experience and receive more training.

Another important finding in these results is that order effects create spurious results in an otherwise good policy capturing effort. Policy capturing studies should be careful to randomize within profiles and report the randomization to prevent order effects and evade criticism. This study's results differed significantly from Hurry's results, even though both found that leadership was the most important dimension, and any research that does not randomize may be reporting spurious results.

There could be other forces at work to create the result found in this research. For example, leadership scores could have had more variance than the other dimensional scores. This would have created the possibility for more covariance, resulting in a better regression result and higher beta weight for the leadership dimension. Table 13 shows

that this is not the case. Leadership had less variance than two other dimensions, interpersonal facilitation and job dedication. Only task performance had lower variance than leadership.

Individual Behavior Means

There were also some consistency problems with the means of the individual behaviors. The means that were captured with the final survey were not statistically the same as those captured by Hurry (1995) and those captured in the pilot survey. The behavior means were also not correlated between the three different data sets. This raises the possibility that the reliability of the measures is not adequate. One possible interpretation of this is that the behaviors chosen were too ambiguous to adequately capture the construct of interest. Or, the behavior may have been mistakenly thought to represent another dimensional construct by the respondents.

However, two sub samples were pulled and compared from the final sample. This comparison yielded favorable results. One would expect that the means might be different, but if the items are measuring the same things reliably, different samples should still be correlated. The sub sample comparison indicated that these measures were reliable across this particular sample. This indicates that the difference between the final survey means, the pilot survey means, and Hurry's means may be the result of something other than unreliable measures. For example, Hurry measured her behaviors in a different context than this research and her sample was less representative of the general Air Force because it was limited to respondents with the rank of Major or above at

Wright-Patterson Air Force Base. The pilot survey also measured Majors and above at AFIT. The final survey was a much closer representation of the Air Force and utilized a larger sample. Sub samples from the final survey indicated that the measures were reliable within the sample. Therefore, I conclude that the final survey accurately measured the behaviors in the context provided and represents a better measure of the total Air Force officer population' views on the value of these behaviors than either the pilot survey or Hurry's survey.

Second Level Regression With Demographic, Personality, and PANAS Variables

The second level regressions, designed to find whether demographic, personality, or PANAS variables can be used to predict the unstandardized beta weights from the first level regression, were woefully insignificant. There is no evidence from this effort to indicate that any of these variables can be used to predict the importance of a behavior dimension. The correlation results showed that only two of the other variables, Orderliness and PA, were correlated with the beta weights and the covariance matrix showed that there was little or no covariance. Without correlation and some level of covariance, a SEM analysis of the data would be useless.

This area addresses Hypothesis 3 through 6 and Hypothesis 10 in Chapter II. This study found that the mean scores for the four dimensions of performance do not vary with rater experience, grade, sex, or commissioning source. In addition, the personality variables do not explain any of the variance in the dimensional ratings. This does not mean that personality does not affect the rating policy of Air Force raters, only that this

study was not able to find any relationship. This may be the product of the fictitious profiles. It would seem logical that personality would be a more active agent in policy if there were an interaction between the rater and ratee. This method precludes this because it used fictitious profiles. Junior officers should not think that personality does not matter, however, because any person who has experienced a personality clash with their supervisor knows that it can affect rating decisions.

Rater Consistency

As expected, rater experience was a statistically significant predictor of rating consistency as measured by adjusted R^2, but only for officers in the grades Major and above. This agrees with the results of the pilot study done for this thesis, but the relationship found was very slight. This could mean that raters get lackadaisical as they get older and rate everything the same, or it could mean that supervisors are more knowledgeable about their policy as they gain more experience. The relationship was so small, though, as to be insignificant in a practical sense because experience had very little influence over consistency. The rank of the rater and the number of officers they currently rate were insignificant in the model, but both of these variables are highly correlated with Total Active Federal Military Service (TAFMS) years. They are highly correlated because the longer officers are in the Air Force, the more likely they are to have supervised junior officers. This is evident in the significant correlation between TAFMS, the number of officers supervised, and years of supervisor experience. Because

of this correlation, they were confounding variables. None of the personality variables had explanatory power for rater consistency.

Rating Leniency

Contrary to the findings of Bernardin, Cooke, and Villanova (2000), Conscientiousness was positively correlated with overall performance, indicating that higher levels of this personality factor are related to higher overall performance scores. There may be a few factors at work here, however. First, this study's respondents rated profiles that were fictitious while Bernardin, Cooke, and Villanova were measuring ratings given in an actual setting to real students. Second, this research measured the full range of the personality construct offered, using 60 item measures. Bernardin, Cooke, and Villanova used a shortened version survey instrument with 10 items for Conscientiousness.

The first factor, fictitious versus real, is a limitation of this study and may explain part of the reason these results differed from Bernardin, Cook, and Villanova (2000). Since these profiles were fictitious, the respondents may not have felt any pressure to control the level of the ratings because there were no rewards for accurate ratings or consequences for inaccurate ratings (Murphy and Cleveland, 1995, 242). Therefore, respondents may let their natural Positive Affectivity (the positive correlation between PA and overall performance) influence the ratings without the controls of Conscientiousness because there is nothing for the conscience to worry about.

The second factor, short version versus full version, indicates that Bernardin, Cook, and Villanova's (2000) findings may not be accurate because the full version of the personality measures is a better measure of the construct of interest, in this case Conscientiousness. A fuller measure should result in a more accurate operationalization of Conscientiousness and therefore more accurate findings based on the measure. However, this researcher would have found a differing correlation more indicative of this difference in measures rather than a change in sign indicating a completely opposite relationship than that found by Bernardin, Cook, and Villanova (2000). This should be explored further outside the realm of policy capturing methodology as discussed in "Future Research."

Ratee Gender Effects

The gender of the ratee appears to have no effect on the ratings given to that particular profile. This effect was examined twice, once with a dummy variable with full interaction in the first level regression, and again using a paired sample analysis comparing the means of the female profile ratings with their corresponding identical male counterparts. Both examinations produced negative results. There is no gender effect in these responses.

Weaknesses

This study has several weaknesses. First and foremost, although part of the sample selected was randomly chosen from different locations, another large part of the sample came from localized students attending AFIT and DAU. The students attending

AFIT were a sample of convenience. Some demographics were controlled to provide an even spread of data (i.e. rank and AFSC), but the other variables were left to randomness and were close to the Air Force percentages reported in Chapter IV. So, in spite of this weakness, the sample provides a fairly representative picture of the Air Force, excluding consideration of the variables that were controlled. An effort that selected respondents in a completely random nature would most likely be more generalizable to the Air Force than this effort.

This study was designed to identify general relative importance of the four dimensions of overall performance. It does not capture the possibility that a junior officer can, and sometimes does, fill a position in the Air Force that requires them to display a higher level of one of the dimensions. An example would be a junior captain who has been assigned as a branch chief and supervises/leads 60 other airmen. The nature of his/her position requires this supervisor to place more importance on the leadership behaviors because that is what is expected of that job. Therefore, the fictitious general nature of the profiles means that this research could not be used to predict ratings of a real junior officer with a particular job.

This study also could not be used to direct junior officers in their performance under a particular supervisor. Each respondent felt very differently about the four dimensions of overall performance, so one could not assume that a supervisor feels leadership is the most important dimension. This study can inform the Air Force, however, that leadership is considered slightly more important than the other dimensions

in determining overall performance, and this can be used to guide future training of junior officers.

The study was also limited because it used only positive behaviors in the fictitious profiles. This has some basis in reality because raters rarely use any type of negative behavior when they formally rate junior officers, but raters can and do consider negative behaviors in their decisions. This study was limited to positive behaviors because one of the reasons for accomplishing this research was to validate or invalidate Hurry's findings (1995). So, this effort was forced to use the behaviors chosen by Hurry so there would be a direct link to her research. The analysis results, however, suggest that the dimensional constructs were not completely captured with these behavior sets.

Another criticism of this method is the use of only positive behaviors. This resulted in a left skewed distribution for all four dimensions. This method gave the data less variance than otherwise could have been achieved by using a full range of both positive and negative behaviors. This may have identified a relationship that would not hold true if the full range of the dimensional constructs were considered.

The final weakness I will discuss is the length of the survey. Most respondents indicated that it took them approximately 30 minutes to complete the survey, and many comments indicated that the survey was too long. The nature of policy capturing with profiles necessitates a long survey, however. The number of behavior dimensions drives the number of behaviors rated in each profile. The rule-of-thumb for regressions is there should be 10 items for every variable measured. In this case, there were four dimensions

plus one overall performance variable, necessitating 50 profiles. This effort used 48 profiles because it is close to 50, and the lists of behaviors lent themselves to 48 profiles.

Future Research

Future research in this area should expand the selected sample frame so that the research is more generalizable. Further research could be targeted at the population of Air Force officers or in different organizations to identify organizational difference in rater priorities. Any further research using this method should also consider using behavior sets that capture the full range of behaviors from positive to negative.

Another important addition to this research would be the introduction of other personality facets. This study may not have captured the correct personality facets for predicting rater leniency or predicting the relative importance of the beta weights. To keep the survey short enough to have a meaningful response rate, only a few personality facets can be examined in each study, but there is room for theory development and testing in this area.

Further research could also be done to explore the contrary rater leniency results of this research compared to the rater leniency results found by Bernardin, Cooke, and Villanova (2000). This could provide valuable insight into the rating leniency debate and provide evidence of a motivation model (Murphy and Cleveland, 1999) versus some other type of model. One possibility would be for a researcher to set up a study where raters evaluated fictitious profiles while another like group of raters evaluated real ratees.

The results suggest that this method for capturing policy may not be adequate. Hobson and Gibson (1983) suggest that a more accurate method of capturing rating policies would be to use field research using real raters and ratees. These results highlight the difficulties in using this particular method and add some weight to Hobson and Gibson's assertion. The results tended to become less amenable to analysis as the research moved further away from the raw data. In fact, the second level regression poses a high level of difficulty because of the restraint imposed by using only one dependent variable. The beta weights lose their meaning when used individually because their original meaning came from the fact that they are relative to each other. That relativity disappears when each dimension is treated separately as a dependent variable. This method may be able to find the policy, but it may never be able to answer the question, "Why do these people have this policy?" Also, a survey instrument may be inadequate to capture the full range of the dimensional constructs and thus an accurate representation of rater's policies unless it was so lengthy that no respondents would complete it.

A field study would certainly be more time consuming and difficult to carry out than the method used in this study, but the results may be more accurate because a full range of behaviors could be observed. Also, the raters' decisions could be discussed to gain more insight into their method for using various performance dimensions to arrive at an overall performance rating.

Appendix A. Leadership Behaviors

Table 30. (Modified from Hurry, 1995: 16)—Leadership Behaviors

Behavior	Reference	Means
Represents the group effectively	1	5.49
Assigns subordinates duties and responsibilities appropriate for their abilities	1,5,6	5.28
Works to create an effective unit atmosphere	3,6	5.82
Monitors the status of work in progress	2	5.59
Reacts confidently when the unexpected occurs	2,3	5.97
Recognizes and encourages effective performance	1,4,6	5.76
Ensures deadlines and performance standards are met	5	5.72
Resolves conflicts between members of the unit	4,6	5.50
Keeps subordinates focused on mission requirements	7	5.55
Resolves conflicting organizational demands	4,6	5.31
Maintains high visibility both on and off the job	4	4.00
Guides and directs subordinates effectively	5	5.53
Uses good judgment in decision making	2	5.08
Coordinates subordinates' efforts to minimize conflicts	2,4,6	5.23
Behaves consistently with subordinates	1,4,6	5.12
Takes a position on controversial issues	1,3	5.46
Persuades others both inside and outside the organization	3,6	4.68
Supports subordinates	1,2,3,4,5,6	4.74
Avoids trespassing on others' responsibility areas	4	6.14
Speaks effectively	4	6.01
Makes tough decisions quickly	2	5.69
Provides appropriate feedback to subordinates	1,2,3,4,5,6	5.35

Sources: 1Bausum (1986), 2Borman and Motowidlo (1993), 3Air Command and Staff College (1988), 4Conger et al. (1989), 5Van Scotter and Shane (1995), 6Borman and Brush (1993), and 7Hurry (1995).

Appendix B. Task Performance Behaviors

Table 31. (Modified from Hurry 1995: 18)—Task Performance Behaviors

Behavior	Reference	Means
Anticipates potential problems	2,3	5.04
Operates equipment skillfully	1	5.77
Uses technical material effectively	1,2,3	5.68
Communicates task information effectively	1,3	5.35
Performs routine tasks efficiently	1,2,3	4.97
Writes clearly and concisely	1,3	4.99
Keeps up with the newest technology	1,2,3	5.86
Performs specialized tasks skillfully	1,2,3	5.66
Performs safely	1,2	5.93
Solves urgent, unexpected problems expertly	2	4.14
Uses equipment, tools, and computers proficiently	1,3	5.70
Provides others with current technical information	2,3	5.92
Plans and organizes work	1,2,3	5.03
Accomplishes job tasks expertly	1,2,3	6.04
Prioritizes work tasks efficiently	1,2,3	5.84
Uses technical expertise to meet real world needs	1,2	5.46
Troubleshoots expertly	2,3	5.57
Solves technical problems expertly	1,2,3	5.31
Collects and accurately interprets information	1,2,3	5.61
Provides expert technical advice to others	1,2,3	5.45

Sources: [1]Department of the Air Force (1988), [2]Van Scotter (1994: 20-24), and [3]Borman and Brush (1993)

Appendix C. Interpersonal Facilitation Behaviors

Table 32. (Modified from Hurry 1995: 19)—Interpersonal Facilitation Behaviors

Behavior	Reference	Means
Acts warm and sociable	5	5.88
Voluntarily pitches in to help the group	1,2	3.86
Treats others fairly	2	5.04
Offers to help others do their work	1,2,3	5.53
Says things to reduce conflicts	5	4.99
Avoids arguments	5	6.00
Supports or encourages coworkers	1,2	4.47
Talks to others before taking actions that affect them	1,2	5.01
Coordinates actions with others	1,4	5.89
Gives coworkers advice about how to do their jobs	1,2	5.19
Develops and maintains good working relationships	2,4	4.41
Acts courteously	5	4.88
Helps someone without being asked	1,2,3	5.20
Gets along with others	5	5.14
Displays a cheerful, confident outlook	2,3	4.05
Displays concern for others	3,4	5.86
Says things to make people feel good about themselves	5	5.35
Encourages others to overcome differences and get along	5	4.54
Encourages coworkers to stick together in hard times	1	6.12
Shows respect for others	2,3,4	5.84
Offers friendly advice	5	5.88
Cooperates with others in the team effectively	1,2	5.92
Listens to others' ideas about getting work done	1,2	5.12
Praises coworkers when they are successful	2	5.81
Lends a hand when a coworker needs it	1,2,3	6.11
Seeks others opinions	5	4.89

Sources: [1]Borman and Motowidlo (1983), [2]Van Scotter (1994), [3]Van Scotter and Shane (1995), [4]Borman and Brush (1993) and [5]Hurry (1995).

Appendix D. Job Dedication Behaviors

Table 33. (Modified from Hurry, 1995: 21)—Job Dedication Behaviors

Behavior	Reference	Means
Overcomes obstacles to complete a task	2,4	5.70
Takes responsibility for his/her actions	5	5.76
Tackles a difficult work assignment enthusiastically	1,2,4	5.35
Adapts to difficult conditions	2,4	5.68
Takes the initiative to solve a work problem	1,2	5.51
Puts extra effort into a task	1,2,3,4	5.95
Ensures work is done right	2	4.80
Shows respect for authority	2,4	4.97
Gives up personal time for the mission	2	5.80
Performs consistently and reliably	2,3	5.36
Overcomes hardships	1,2,4	5.70
Displays proper military appearance and bearing	1,2,4	5.04
Puts in extra hours to get work done on time	1,2,3,4	5.88
Follows the supervisor's instructions	5	4.95
Renders proper military courtesy	1,2,4	5.39
Avoids shortcuts when work is overdue	5	5.62
Asks for challenging work assignments	5	4.97
Complies with instructions even when supervision is not present	1,2	5.97
Strives to excel	2,3	5.89
Works hard	2,3	6.11
Pays close attention to important details	1,2	4.84
Defends the supervisor's decisions	2	5.58
Volunteers for additional duties	1,2	5.32
Volunteers for difficult assignments	2	4.92

Sources: [1]Borman and Motowidlo (1983), [2]Van Scotter (1994), [3]Van Scotter and Shane (1995), [4]Borman and Brush (1993), and [5]Hurry (1995).

Appendix E. Beta Weights

Table 34. Beta Weights and R^2 Values (n=48 for every regression)

Respondent	LD	TP	IF	JD	R^2	Respondent	LD	TP	IF	JD	R^2
1	0.401	0.185	0.245	0.166	0.759	37	0.368	0.299	0.262	0.234	0.832
2	0.239	0.216	0.174	0.273	0.517	38	0.329	0.264	0.215	0.232	0.661
3	0.224	0.335	0.26	0.277	0.891	39	0.203	0.228	0.372	0.423	0.727
4	0.338	0.213	0.23	0.296	0.72	40	0.207	0.321	0.278	0.331	0.762
5	0.306	0.272	0.26	0.237	0.502	41	0.219	0.268	0.348	0.198	0.863
6	0.239	0.233	0.247	0.348	0.799	42	0.228	0.313	0.246	0.143	0.838
7	0.176	0.124	0.325	0.275	0.753	43	0.315	0.18	0.283	0.214	0.621
8	0.296	0.266	0.317	0.176	0.773	44	0.199	0.099	0.325	0.458	0.844
9	0.057	0.344	0.252	0.396	0.774	45	0.313	0.287	0.256	0.236	0.663
10	0.342	0.259	0.346	0.254	0.877	46	0.311	0.47	0.155	0.21	0.793
11	0.227	0.13	0.465	0.297	0.704	47	0.138	0.291	0.361	0.25	0.817
12	0.342	0.042	0.419	0.15	0.611	48	0.161	0.068	0.087	0.182	0.135
13	0.206	0.279	0.065	0.407	0.822	49	0.235	0.207	0.065	0.257	0.51
14	0.278	0.117	0.321	0.242	0.873	50	0.292	0.439	0.187	0.245	0.73
15	0.362	0.182	0.059	0.184	0.808	51	0.285	0.202	0.3	0.224	0.876
16	0.241	0.229	0.299	0.192	0.541	52	0.245	0.253	0.196	0.159	0.751
17	0.256	0.262	0.288	0.317	0.699	53	0.207	0.308	0.207	0.223	0.874
18	0.219	-0.219	0.353	-0.005	0.881	54	0.33	0.099	0.44	0.176	0.777
19	0.282	0.239	0.013	0.169	0.428	55	0.381	0.463	0.052	0.199	0.718
20	0.263	0.308	0.231	0.203	0.658	56	0.263	0.287	0.135	0.202	0.657
21	0.151	0.24	0.32	0.298	0.739	57	0.313	0.238	0.239	0.407	0.568
22	0.269	0.215	0.496	0.317	0.834	58	0.217	0.259	0.306	0.28	0.841
23	0.322	0.256	0.235	0.378	0.772	59	0.281	0.235	0.373	0.264	0.721
24	0.276	0.26	0.227	0.309	0.873	60	0.478	0.233	0.444	0.298	0.862
25	0.378	0.291	0.204	0.246	0.873	61	0.369	0.295	0.204	0.288	0.898
26	0.121	0.122	0.152	0.242	0.395	62	0.296	0.38	0.049	0.252	0.735
27	0.25	0.283	0.393	0.428	0.576	63	0.272	0.314	0.328	0.288	0.66
28	0.272	0.24	0.25	0.218	0.879	64	0.438	0.161	0.328	0.319	0.728
29	0.239	0.304	0.196	0.303	0.872	65	0.337	0.341	0.029	0.147	0.386
30	0.223	0.218	0.263	0.28	0.874	66	0.188	0.293	0.161	0.178	0.744
31	0.294	0.184	0.381	0.27	0.834	67	0.189	0.368	0.181	0.265	0.583
32	0.366	0.199	0.281	0.198	0.742	68	0.285	0.203	0.139	0.323	0.741
33	0.319	0.36	0.333	0.352	0.786	69	0.228	0.289	0.265	0.219	0.892
34	0.245	0.202	0.297	0.102	0.745	70	0.273	0.263	0.277	0.313	0.838
35	0.164	0.247	0.237	0.222	0.863	71	0.135	0.209	0.269	0.287	0.651
36	0.308	0.19	0.395	0.203	0.832	72	0.38	0.285	0.361	0.423	0.761

Table 34. Continued

Respondent	LD	TP	IF	JD	R^2	Respondent	LD	TP	IF	JD	R^2
73	0.338	0.169	0.261	0.37	0.64	111	0.309	0.355	0.234	0.281	0.715
74	0.297	0.222	0.149	0.123	0.442	112	0.39	0.147	0.186	0.19	0.451
75	0.215	0.382	0.113	0.212	0.529	113	0.087	0.137	0.226	0.143	0.394
76	0.307	0.185	0.259	0.274	0.814	114	0.351	0.562	0.339	0.336	0.599
77	0.295	0.31	0.246	0.291	0.925	115	0.315	0.22	0.18	0.209	0.657
78	0.156	0.317	0.219	0.179	0.713	116	0.235	0.25	0.438	0.333	0.713
79	0.341	0.243	0.193	0.27	0.674	117	0.141	0.192	0.332	0.231	0.436
80	0.243	0.203	0.205	0.395	0.844	118	0.363	0.219	0.373	0.231	0.778
81	0.323	0.354	0.178	0.418	0.711	119	0.169	0.29	0.199	0.436	0.826
82	0.261	0.26	0.278	0.262	0.586	120	0.298	0.266	0.222	0.283	0.848
83	0.235	0.235	0.103	0.276	0.661	121	0.336	0.277	0.19	0.283	0.644
84	0.307	0.217	0.231	0.266	0.663	122	0.313	0.189	0.085	0.312	0.671
85	0.208	0.289	0.265	0.212	0.768	123	0.308	0.168	0.272	0.318	0.83
86	0.308	0.35	0.279	0.145	0.733	124	0.352	0.219	0.148	0.304	0.709
87	0.157	0.236	0.338	0.182	0.709	125	0.247	0.392	0.217	0.26	0.935
88	0.611	-0.056	0.278	0.167	0.905	126	0.305	0.256	0.12	0.398	0.757
89	0.309	0.261	0.198	0.287	0.86	127	0.282	0.135	0.495	0.303	0.678
90	0.265	0.233	0.255	0.289	0.8	128	0.19	0.337	0.295	0.268	0.872
91	0.263	0.215	0.212	0.248	0.67	129	0.259	0.35	0.144	0.321	0.795
92	0.195	0.294	0.246	0.254	0.806	130	0.22	0.147	0.197	0.533	0.935
93	0.26	0.171	0.084	0.164	0.417	131	0.277	0.411	0.38	0	0.491
94	0.301	0.309	0.334	0.247	0.864	132	0.417	0.515	0.397	0.638	0.746
95	0.192	0.287	0.289	0.218	0.748	133	0.206	0.202	0.283	0.306	0.803
96	0.281	0.292	0.172	0.056	0.59	134	0.25	0.185	0.391	0.313	0.828
97	0.266	0.286	0.322	0.291	0.815	135	0.34	0.31	0.289	0.263	0.866
98	0.174	0.295	0.114	0.337	0.753	136	0.2	0.189	0.247	0.329	0.624
99	0.228	0.301	0.192	0.258	0.816	137	0.321	0.311	0.222	0.34	0.81
100	0.331	0.307	0.19	0.175	0.711	138	0.376	0.213	0.305	0.159	0.842
101	0.275	0.297	0.285	0.26	0.903	139	0.223	0.263	0.306	0.262	0.684
102	0.233	0.208	0.351	0.185	0.737	140	0.273	0.226	0.211	0.305	0.743
103	0.258	0.201	0.412	0.235	0.841	141	0.39	0.252	0.247	0.373	0.832
104	0.248	0.229	0.315	0.147	0.786	142	0.278	0.307	0.279	0.274	0.818
105	0.261	0.237	0.104	0.301	0.674	143	0.509	0.166	0.245	0.316	0.753
106	0.306	0.219	0.268	0.154	0.783	144	0.207	0.229	0.292	0.248	0.767
107	0.187	0.052	0.143	0.242	0.292	145	0.259	0.264	0.174	0	0.412
108	0.351	0.08	0.221	0.257	0.758	146	0.203	0.196	0.32	0.281	0.699
109	0.251	0.257	0.34	0.215	0.76	147	0.413	0.192	0.336	0.256	0.607
110	0.064	0.153	0.078	0.053	0.039	148	0.154	0.255	0.205	0.263	0.741

Table 34. Continued

Respondent	LD	TP	IF	JD	R^2	Respondent	LD	TP	IF	JD	R^2
149	0.346	0.366	0.272	0.441	0.767	190	0.549	0.4	0.211	0.215	0.799
150	0.291	0.327	0.351	0	0.621	191	0.282	0.227	0.295	0.145	0.711
151	0.289	0.269	0.359	0.22	0.847	192	0.242	0.239	0.253	0.269	0.775
152	0.287	0.354	0.177	0.227	0.649	193	0.813	0.259	0.213	0.223	0.827
153	0.485	0.266	0.396	0	0.406	194	0.301	0.262	0.109	0.272	0.74
154	0.371	0.295	0.216	0.209	0.907	195	0.358	0.285	0.371	0.231	0.793
155	0.296	0.254	0.257	0.231	0.828	196	0.312	0.225	0.236	0.288	0.765
156	0.363	0.28	0.123	0.318	0.845	197	0.257	0.391	0.314	0.279	0.688
157	0.333	0	0.599	0.481	0.765	198	0.094	0.475	0.3	0.346	0.554
158	0.276	0.364	0.04	0.349	0.856	199	0.301	0.188	0.299	0.15	0.708
159	0.29	0.255	0.201	0.303	0.809	200	0.372	0.364	0.124	0.341	0.453
160	0.19	0.275	0.0699	0.146	0.44	201	0.2	0.204	0.305	0.236	0.784
161	0.348	0.247	0.284	0.308	0.656	202	0.329	0.204	0.224	0.351	0.633
162	0.347	0.235	0.259	0.324	0.819	203	0.349	0.262	0.202	0.182	0.866
163	0.298	0.268	0.347	0.175	0.641	204	0.415	0.236	0.283	0.145	0.72
164	0.306	0.222	0.234	0.286	0.725	205	0.156	0.104	0.213	0.376	0.577
165	0.45	0.274	0.206	0.223	0.739	206	0.236	0.403	0.034	0.396	0.824
166	0.23	0.256	0.233	0.19	0.708	207	0.337	0.203	0.19	0.296	0.641
167	0.326	0.299	0.225	0.216	0.834	208	0.358	0.197	0.199	0.239	0.92
168	0.267	0.283	0.293	0.287	0.912	209	0.185	0.296	0.305	0.293	0.706
169	0.2	0.185	0.251	0.289	0.798	210	0.186	0.269	0.382	0.12	0.581
170	0.327	0.181	0.238	0.258	0.824	211	0.316	0.239	0.331	0.252	0.841
171	0.337	0.165	0.255	0.311	0.889	212	0.171	0.203	0.325	0.142	0.626
172	0.379	0.156	0.346	0.096	0.65	213	0.229	0.216	0.29	0.392	0.731
173	0.372	0.384	0.341	0.215	0.753	214	0.285	0.192	0.211	0.218	0.61
174	0.315	0.208	0.184	0.166	0.806	215	0.381	0.254	0.368	0.201	0.786
175	0.354	0.224	0.217	0.187	0.694	216	0.178	0.392	0.027	0.386	0.934
176	0.049	0.093	0.126	0.035	0.216	217	0.363	0.197	0	0.35	0.718
177	0.437	0.301	0.115	0.288	0.869	218	0.4	0.23	0.309	0	0.559
178	0.175	0.312	0.291	0.321	0.813	219	0.269	0.276	0.178	0.143	0.811
179	0.309	0.213	0.179	0.268	0.776	220	0.313	0.083	0.159	0.377	0.599
180	0.28	0.075	0.272	0.301	0.868	221	0.234	0.317	0.212	0.195	0.591
181	0.274	0.157	0.304	0.226	0.671	222	0.21	0.27	0.234	0.225	0.685
182	0.236	0.198	0.343	0.307	0.855	223	0.312	0.211	0.162	0.215	0.685
183	0.223	0.23	0.261	0.258	0.62	224	0.149	0.153	0.393	0.307	0.764
184	0.172	0.235	0.243	0.254	0.659	225	0.52	0.304	0.119	0.375	0.584
185	0.003	0.464	0.228	0.333	0.68	226	0.209	0.2	0.121	0.054	0.257
186	0.329	0.345	0.169	0.202	0.684	227	0.1	0.454	0.063	0.294	0.82
187	0.29	0.271	0.155	0.315	0.82	228	0.146	0.246	0.276	0.276	0.83
188	0.236	0.324	0.309	0.249	0.701	229	0.262	0.313	0.236	0.228	0.619
189	0.426	0.292	0.254	0.398	0.587						

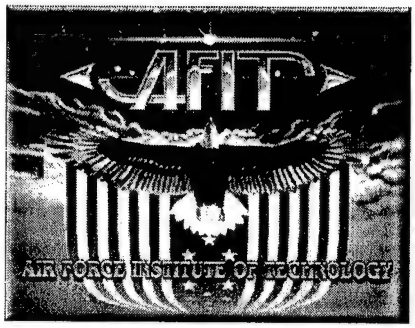
Appendix F. Survey

DETERMINING IMPORTANT

BEHAVIORS

FOR

JUNIOR OFFICER SUCCESS



ABOUT THIS SURVEY

Purpose: The purpose of this survey is to assess the relative importance of four types of behaviors displayed by company grade officers—job dedication, interpersonal facilitation, leadership, and task performance. Your participation will help us determine the types of behaviors that people in the Air Force consider most important for junior officers to possess.

Content: The survey is divided into three parts. The first part contains some demographic questions to make comparisons between groups. The second section contains behavior profiles for some fictitious company grade officers. Each profile consists of the name of the individual, four behaviors, the category of each behavior, scales for rating each of the four behaviors, and a scale for rating the overall performance of the individual. The final section contains a series of questions that measure personality traits. These will be used to assess differences across all people who participate in this survey. It should take approximately 40 minutes to complete this questionnaire.

Confidentiality: Your answers are STRICTLY CONFIDENTIAL, and will be **anonymous** unless you wish to disclose your identity. Findings will be reported at the group level only, so no one will be able to trace your responses back to you. No one outside my research team will see your questionnaire.

When Complete: Please place the completed survey in the return envelope provided and place it in the standard Air Force mail distribution system. We appreciate your response - it is important and essential to the success of the study.

Contact: If you have questions or comments about the survey, please contact me or my advisor by telephone or through electronic mail. We sincerely thank you for your participation.

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DSN: 785-3636 x4711

USAF Survey Control Number 00-94
Expires 31 Dec 00

Part I. Information About You

1. What is your rank?

☐ 2nd Lt ☐ 1st Lt ☐ Capt ☐ Major ☐ Lt Col ☐ Col

2. Please indicate your gender:

☐ Male ☐ Female

3. Please indicate the number of total active military service years you have:

_____ Years

4. If prior enlisted, how many of your total active military service years were spent as enlisted?

_____ Years

5. What is your primary job category? (If you are not currently in one of these categories, please choose the one that best describes the major portion of your career or use the "other" option.)

☐ Rated Officer (pilot, navigator, etc.)
☐ Support Officer (logistician, personnel, security police, finance, etc.)
☐ Analysis/Engineer
☐ Other (please specify)_____

Supervisor is defined here as direct reporting official. To qualify as a supervisor, you must have had to rate an individual on their performance.

6. Approximately how many years of experience do you have as a supervisor?

☐ 0 ☐ 1-4 ☐ 5-8 ☐ 9-13 ☐ 14 or more

7. Approximately how many officers have you rated in your career?

☐ 0 ☐ 1-3 ☐ 4-6 ☐ 7-10 ☐ 11 or more

8. What is your source of commission?

☐ USAF Academy ☐ OTS
☐ ROTC ☐ Other (please specify) _____

Part II. The Profiles

In this portion of the survey you are asked to rate behaviors of fictitious officers. The behaviors represent four broad categories of behaviors as follows:

Leadership—The art of influencing and directing people to accomplish the mission.
Task Performance—The proficiency with which an individual performs activities that are formally recognized as the technical or specialized activities that define his or her job.
Interpersonal Facilitation—The extent to which a worker supports other members of the organization through expressions of concern, consideration, cooperative and helpful acts.

Job Dedication—The extent to which a worker goes above and beyond the requirements of his or her official job description and exceeds the minimum expectations of his or her rater.

Read the behaviors within each profile. Then, rate each behavior and the overall performance of the officer by placing an X in the box that you feel best describes the performance of each officer accordingly.

Example:

Joe Smith

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Task Performance	*Accomplishes assignments efficiently*	☐ ☐ ☐ ☐ ☒ ☐ ☐
Leadership	*Leads effortlessly*	☐ ☐ ☐ ☐ ☐ ☒ ☐
Job Dedication	*Works really hard most of the time*	☐ ☐ ☐ ☒ ☐ ☐ ☐
Interpersonal Facilitation	*Rarely fights with others*	☐ ☐ ☐ ☐ ☐ ☐ ☒

Read these example behaviors, then place an X in one of the boxes here for each behavior.

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☒ ☐

Then rate the overall performance of the officer by placing an X in one of these boxes

Officer Profiles

Bill Cox

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Task Performance	*Anticipates potential problems*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Represents the group effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Overcomes obstacles to complete a task*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Acts warm and sociable*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Gary Fuller

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Interpersonal Facilitation	*Voluntarily pitches in to help the group*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Recognizes and encourages effective performance*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Takes responsibility for his/her actions*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Operates equipment skillfully*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Mark Farrior

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High	Medium
Task Performance	*Uses technical material effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Interpersonal Facilitation	*Treats others fairly*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Job Dedication	*Tackles a difficult work assignment enthusiastically*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Leadership	*Takes a position on controversial issues*	☐ ☐ ☐ ☐ ☐ ☐ ☐	

	Overall Rating Low	Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐	

Elaine Simpson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High	Medium
Interpersonal Facilitation	*Avoids arguments*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Task Performance	*Performs safely*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Leadership	*Makes tough decisions quickly*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Job Dedication	*Renders proper military courtesy*	☐ ☐ ☐ ☐ ☐ ☐ ☐	

	Overall Rating Low	Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐	

Earl Phillips

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High	Medium
Interpersonal Facilitation	*Acts warm and sociable*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Leadership	*Speaks effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Job Dedication	*Follows the supervisor's instructions*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Task Performance	*Uses technical material effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐	

	Overall Rating Low	Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐	

Brian Anderson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High	Medium
Interpersonal Facilitation	*Avoids arguments*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Leadership	*Maintains high visibility both on and off the job*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Job Dedication	*Puts extra effort into a task*	☐ ☐ ☐ ☐ ☐ ☐ ☐	
Task Performance	*Writes clearly and concisely*	☐ ☐ ☐ ☐ ☐ ☐ ☐	

	Overall Rating Low	Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐	

Harold Echard

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Monitors the status of work in progress*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Keeps up with the newest technology*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Supports or encourages coworkers*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Ensures work is done right*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Chuck Porter

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Interpersonal Facilitation	*Cooperates with others in the team effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Provides others with current technical information*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Gives up personal time for the mission*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Persuades others both inside and outside the organization*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Susan Gates

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Coordinates subordinates' efforts to minimize conflicts*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Performs specialized tasks skillfully*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Talks to others before taking actions that affect them*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Shows respect for authority*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Bill Taylor

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Interpersonal Facilitation	*Coordinates actions with others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Works to create an effective unit atmosphere*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Plans and organizes work*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Volunteers for difficult assignments*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Amy Godwin

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Task Performance	*Solves urgent, unexpected problems expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Gives coworkers advice about how to do their jobs*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Performs consistently and reliably*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Avoids trespassing on others' responsibility areas*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Charles Zimmer

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Interpersonal Facilitation	*Acts courteously*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Puts in extra hours to get work done on time*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Prioritizes work tasks efficiently*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Provides appropriate feedback to subordinates*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Kevin Meadows

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Job Dedication	*Adapts to difficult conditions*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Guides and directs subordinates effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Solves technical problems expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Develops and maintains good working relationships*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Hank Martin

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Uses good judgment in decision making*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Displays a cheerful, confident outlook*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Defends the supervisor's decisions*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Uses equipment, tools, and computers proficiently*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Andrew Harris

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Keeps subordinates focused on mission requirements*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Adapts to difficult conditions*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Communicates task information effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Offers to help others do their work*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Benjamin Ramsey

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Task Performance	*Performs specialized tasks skillfully*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Resolves conflicting organizational demands*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Gets along with others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Complies with instructions when supervision is not present*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Victor Thompson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Assigns subordinates duties and responsibilities appropriate for their abilities*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Voluntarily pitches in to help the group*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Troubleshoots expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Takes the initiative to solve a work problem*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Mary Hill

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Task Performance	*Performs safely*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Gives up personal time for the mission*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Coordinates actions with others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Ensures deadlines and performance standards are met*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Gregg Young

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Task Performance	*Anticipates potential problems*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Displays proper military appearance and bearing*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Behaves consistently with subordinates*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Helps someone without being asked*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

John Adams

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Task Performance	*Accomplishes job tasks expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Displays concern for others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Resolves conflicts between members of the unit*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Avoids shortcuts when work is overdue*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Pamela Davis

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Leadership	*Supports subordinates*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Says things to make people feel good about themselves*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Asks for challenging work assignments*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Prioritizes work tasks efficiently*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Larry Lane

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Task Performance	*Writes clearly and concisely*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Reacts confidently when the unexpected occurs*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Asks for challenging work assignments*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Encourages others to overcome differences and get along*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Alan Larson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Avoids trespassing on others' responsibility areas*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Solves urgent, unexpected problems expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal		☐ ☐ ☐ ☐ ☐ ☐ ☐
Facilitation	*Offers to help others do their work*	
Job Dedication	*Overcomes obstacles to complete a task*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Lance Kennedy

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Resolves conflicting organizational demands*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal		☐ ☐ ☐ ☐ ☐ ☐ ☐
Facilitation	*Develops and maintains good working relationships*	
Job Dedication	*Overcomes hardships*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Anticipates potential problems*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Judy Vaughn

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Interpersonal		
Facilitation	*Says things to make people feel good about themselves*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Accomplishes job tasks expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Takes responsibility for his/her actions*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Recognizes and encourages effective performance*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Ned White

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Job Dedication	*Puts extra effort into a task*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal		☐ ☐ ☐ ☐ ☐ ☐ ☐
Facilitation	*Listens to others' ideas about getting work done*	
Leadership	*Maintains high visibility both on and off the job*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Writes clearly and concisely*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Thomas Robinson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High
Task Performance	*Collects and accurately interprets information*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Makes tough decisions quickly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Ensures work is done right*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Offers friendly advice*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Bruce Hudson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Job Dedication	*Follows the supervisor's instructions*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Gets along with others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Provides others with current technical information*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Provides appropriate feedback to subordinates*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Marcia Moore

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Leadership	*Takes a position on controversial issues*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Communicates task information effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Encourages coworkers to stick together in hard times*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Volunteers for additional duties*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Patrick Baker

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Job Dedication	*Works hard*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Avoids trespassing on others' responsibility areas*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Offers friendly advice*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Troubleshoots expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Carolyn Jackson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Leadership	*Coordinates subordinates' efforts to minimize conflicts*	
Task Performance	*Troubleshoots expertly*	
Job Dedication	*Pays close attention to important details*	
Interpersonal Facilitation	*Cooperates with others in the team effectively*	

	Overall Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Please mark the box ☒ that best reflects this subordinate's overall performance →	

Robert Long

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Job Dedication	*Shows respect for authority*	
Task Performance	*Provides expert technical advice to others*	
Leadership	*Assigns subordinates duties and responsibilities appropriate for their abilities*	
Interpersonal Facilitation	*Gives coworkers advice about how to do their jobs*	

	Overall Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Please mark the box ☒ that best reflects this subordinate's overall performance →	

Oscar Olsen

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Task Performance	*Operates equipment skillfully*	
Interpersonal Facilitation	*Supports or encourages a coworker*	
Leadership	*Monitors the status of work in progress*	
Job Dedication	*Performs consistently and reliably*	

	Overall Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Please mark the box ☒ that best reflects this subordinate's overall performance →	

Joseph Evans

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Job Dedication	*Takes the initiative to solve a work problem*	
Leadership	*Supports subordinates*	
Task Performance	*Performs routine tasks efficiently*	
Interpersonal Facilitation	*Says things to reduce conflicts*	

	Overall Rating Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
Please mark the box ☒ that best reflects this subordinate's overall performance →	

Rachel Jacobs

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Interpersonal Facilitation	*Encourages coworkers to stick together in hard times*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Uses technical expertise to meet real world needs*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Complies with instructions when supervision is not present*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Uses good judgment in decision making*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Peter Nelson

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Interpersonal Facilitation	*Shows respect for others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Works to create an effective unit atmosphere*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Keeps up with the newest technology*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Overcomes hardships*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Beth Carpenter

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Task Performance	*Uses equipment, tools, and computers proficiently*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Acts courteously*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Displays proper military appearance and bearing*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Persuades others both inside and outside the organization*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Richard Rivera

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low Medium High
Job Dedication	*Pays close attention to important details*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Uses equipment, tools, and computers proficiently*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Resolves conflicts between members of the unit*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Praises coworkers when they are successful*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low Medium High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Ronald Sifford

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Speaks effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Avoids shortcuts when work is overdue*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Talks to others before taking actions that affect them*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Uses technical expertise to meet real world needs*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

David Woods

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Leadership	*Resolves conflicting organizational demands*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Provides expert technical advice to others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Works hard*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Treats others fairly*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Brandon Griffin

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Interpersonal Facilitation	*Praises coworkers when they are successful*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Volunteers for additional duties*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Collects and accurately interprets information*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Reacts confidently when the unexpected occurs*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Bob Jones

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Task Performance	*Accomplishes job tasks expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Shows respect for others*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Ensures deadlines and performance standards are met*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Strives to excel*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Mark Lorton

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High Medium
Interpersonal Facilitation	*Lends a hand when a coworker needs it*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Represents the group effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Tackles a difficult work assignment enthusiastically*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Performs routine tasks efficiently*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low High Medium
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Ethan Duncan

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High Medium
Task Performance	*Solves technical problems expertly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Guides and directs subordinates effectively*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Listens to others' ideas about getting work done*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Defends the supervisor's decisions*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low High Medium
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Nancy Brewer

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High Medium
Interpersonal Facilitation	*Seeks others' opinions*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Volunteers for a difficult assignment*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Behaves consistently with subordinates*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Provides expert technical advice to others*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low High Medium
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

John Jordan

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating Low High Medium
Job Dedication	*Renders proper military courtesy*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Keeps subordinates focused on mission requirements*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Plans and organizes work*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Displays a cheerful, confident outlook*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating Low High Medium
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Robert Brown

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Task Performance	*Performs specialized tasks skillfully*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Makes tough decisions quickly*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Puts in extra hours to get work done on time*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Interpersonal Facilitation	*Helps someone without being asked*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Diana Mendoza

Behavior Type	Examples of "On the Job" Behaviors	Behavior Rating: Low / Medium / High
Interpersonal Facilitation	*Says things to reduce conflicts*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Task Performance	*Prioritizes work tasks efficiently*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Leadership	*Reacts confidently when the unexpected occurs*	☐ ☐ ☐ ☐ ☐ ☐ ☐
Job Dedication	*Strives to excel*	☐ ☐ ☐ ☐ ☐ ☐ ☐

	Overall Rating: Low / Medium / High
Please mark the box ☒ that best reflects this subordinate's overall performance →	☐ ☐ ☐ ☐ ☐ ☐ ☐

Part III. Personality Information

Please use the rating scale below to describe how accurately each statement applies to you. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. Please read each statement carefully, and then place an X in the square that BEST reflects the extent to which this behavior describes you.

1	2	3	4	5
Very Inaccurate	Inaccurate	Neither Inaccurate nor Accurate	Accurate	Very Accurate

Like to act on a whim.	1	2	3	4	5
Know how to get things done.	1	2	3	4	5
Have difficulty starting tasks.	1	2	3	4	5
Demand quality.	1	2	3	4	5
Try to follow the rules.	1	2	3	4	5
Rush into things.	1	2	3	4	5
Am always prepared.	1	2	3	4	5
Break my promises.	1	2	3	4	5
Choose my words with care.	1	2	3	4	5

Do the opposite of what is asked.	1	2	3	4	5
Work hard.	1	2	3	4	5
Love order and regularity.	1	2	3	4	5
Waste my time.	1	2	3	4	5
Need a push to get started.	1	2	3	4	5
Get others to do my duties.	1	2	3	4	5
Like to tidy up.	1	2	3	4	5
Find it difficult to get down to work.	1	2	3	4	5
Excel in what I do.	1	2	3	4	5

1	2	3	4	5
Very Inaccurate	Inaccurate	Neither Inaccurate nor Accurate	Accurate	Very Accurate

Start tasks right away.	1	2	3	4	5
Often forget to put things back in their proper place.	1	2	3	4	5
Do just enough work to get by.	1	2	3	4	5
Carry out my plans.	1	2	3	4	5
Have little to contribute.	1	2	3	4	5
Tell the truth.	1	2	3	4	5
Don't understand things.	1	2	3	4	5
Am sure of my ground.	1	2	3	4	5
Often make last-minute plans.	1	2	3	4	5
Do crazy things.	1	2	3	4	5
Turn plans into actions.	1	2	3	4	5
Misrepresent the facts.	1	2	3	4	5
Misjudge situations.	1	2	3	4	5
Jump into things without thinking.	1	2	3	4	5
Postpone decisions.	1	2	3	4	5
Listen to my conscience.	1	2	3	4	5
Handle tasks smoothly.	1	2	3	4	5
Act without thinking.	1	2	3	4	5
Leave my belongings around.	1	2	3	4	5
Do more than what's expected of me.	1	2	3	4	5
Get chores done right away.	1	2	3	4	5

Do things according to a plan.	1	2	3	4	5
Set high standards for myself and others.	1	2	3	4	5
Stick to my chosen path.	1	2	3	4	5
Am not bothered by disorder.	1	2	3	4	5
Complete tasks successfully.	1	2	3	4	5
Make rash decisions.	1	2	3	4	5
Want everything to be "just right."	1	2	3	4	5
Am not bothered by messy people.	1	2	3	4	5
Like order.	1	2	3	4	5
Keep my promises.	1	2	3	4	5
Get to work at once.	1	2	3	4	5
Break rules.	1	2	3	4	5
Avoid mistakes.	1	2	3	4	5
Come up with good solutions.	1	2	3	4	5
Leave a mess in my room.	1	2	3	4	5
Go straight for the goal.	1	2	3	4	5
Am not highly motivated to succeed.	1	2	3	4	5
Don't see the consequences of things.	1	2	3	4	5
Plunge into tasks with all my heart.	1	2	3	4	5
Pay my bills on time.	1	2	3	4	5
Put little time and effort into my work.	1	2	3	4	5

This scale consists of a number of words that describe different feelings and emotions. Please read each item and then place an X in the square that BEST reflects the extent you have felt this way during the past year. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

interested	1	2	3	4	5
distressed	1	2	3	4	5
excited	1	2	3	4	5
upset	1	2	3	4	5
strong	1	2	3	4	5
guilty	1	2	3	4	5
scared	1	2	3	4	5
hostile	1	2	3	4	5
enthusiastic	1	2	3	4	5
proud	1	2	3	4	5

irritable	1	2	3	4	5
alert	1	2	3	4	5
ashamed	1	2	3	4	5
inspired	1	2	3	4	5
nervous	1	2	3	4	5
determined	1	2	3	4	5
attentive	1	2	3	4	5
jittery	1	2	3	4	5
active	1	2	3	4	5
afraid	1	2	3	4	5

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Vita

First Lieutenant Owen D. Stephens graduated from Advance High School in Advance, Missouri in May 1986. He entered the Air Force as an Airman Basic in March 1987. His first three assignments were Torrejon AB, Spain, Nellis AFB, NV, and Holloman AFB, NM, respectively. In 1994, he was accepted into the Airman Scholarship and Commissioning Program and entered undergraduate studies at Southeast Missouri State University where he graduated Magna Cum Laude in May 1997 with a Bachelor of Science degree in Economics. He was commissioned through the AFROTC Detachment 205A at Southeast Missouri State University where he was recognized as a Distinguished Graduate.

His first officer assignment was in June 1997 at Tinker AFB as a contract specialist in the 38th Engineering Installation Wing. In January 1999, he was assigned as the Chief Mission Support Officer in the same wing. In August 1999, he entered the Graduate School of Engineering and Management, Air Force Institute of Technology. Upon graduation, he will be assigned to the F-16 System Program Office at Wright-Patterson AFB.

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14. ABSTRACT

This study examined the relationship between four dimensions of performance—leadership, task performance, interpersonal facilitation, and job dedication—and overall performance by junior officers in the Air Force. It was hypothesized that the four dimensions would have different relative importance to overall performance, ratee gender would have no effect on rating policy, and raters with greater experience would show greater rating consistency. Finally, it was hypothesized that the Conscientiousness factor of the International Personality Inventory Protocol and Positive and Negative Affectivity may be correlated with the relative importance of the four dimensions of performance and a rater leniency measure and that significant prediction models could be developed.

For the entire sample and a sub sample of Majors-and-above, leadership was the most important dimension. The other dimensions—task performance, interpersonal facilitation, and job dedication—were equally important, yet less important than leadership. For Captains and below, all dimensions were equally important. There was no significant gender effect on ratings, but there was evidence that experience is positively related to consistency of ratings for Majors and above. Neither Conscientiousness nor Positive and Negative Affectivity could be used to develop a significant prediction model for the importance of behavior dimensions or rater leniency.

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